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## School Climate in the School Choice Era: A Comparative Analysis of District-Run Public Schools and Charter Schools

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

SCHOOL CLIMATE IN THE SCHOOL CHOICE ERA: A COMPARATIVE  
ANALYSIS OF DISTRICT-RUN PUBLIC SCHOOLS AND CHARTER SCHOOLS

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

PUBLIC AFFAIRS

by

Christopher Duszka

2018

To: Dean John F. Stack, Jr.  
Steven J. Green School of International and Public Affairs

This dissertation, written by Christopher Duszka, and entitled School Climate in the School Choice Era: A Comparative Analysis of District-Run Public Schools and Charter Schools, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read the dissertation and recommend that it be approved.

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Date of Defense: September 10, 2018

The dissertation of Christopher Duszka is approved.

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Andrés G. Gil  
Vice President for Research and Economic Development  
and Dean of the University Graduate School

Florida International University, 2018

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## DEDICATION

I dedicate this dissertation to my wife, Mackenzie Duszka. Your support, patience, and love made the achievement of many goals in my life possible. You encourage me to pursue my dreams and aspirations, regardless of the challenges they present.

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ABSTRACT OF THE DISSERTATION

SCHOOL CLIMATE IN THE SCHOOL CHOICE ERA: A COMPARATIVE  
ANALYSIS OF DISTRICT-RUN PUBLIC SCHOOLS AND CHARTER SCHOOLS

by

Christopher Duszka

Florida International University, 2018

Miami Florida

Professor Jamie Flexon, Co-Major Professor

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Comparative analyses of district-run public schools and charter schools are limited to performance outcomes. There is a dearth of research on how the school-types vary on factors consequential to performance such as school climate. Public-private distinctions, such as in organizational autonomy, value orientations, funding structures, and management practices, could result in school climate dissimilarities between district-run public schools and charter schools.

The aim of this dissertation is to assess the influence organizational factors have on school climate and determine if school-type affects school climate. Student and staff school climate survey data from the Miami-Dade school district were utilized for this dissertation. Structural equation modeling was employed to test theoretical models of students' and staffs' perceptions of school climate using data from 2001-2002 through 2015-2016 academic years. Within-between effects panel regression was utilized to test

the effect of school-type on school climate constructs over time using data from 2005-2006 through 2015-2016 academic years.

The structural equation results demonstrate that milieu, ecology, culture, and organizational structure influence students' and staffs' perceptions of their schools' climates. Ecology has the strongest association with students' perceptions of school climate. Job satisfaction, a part of milieu and culture, has the strongest association with staffs' perceptions of school climate. The results indicate that the theoretical models of school climate employed by this study are sound.

The within-between effects panel regression results demonstrate that characteristics inherent to school-type have a plausible influence on students' perceptions of school climate, but not for staff. Charter school students rated their school climates more favorably than traditional public schools, but when other factors are controlled, traditional public schools and magnet schools had more favorable ratings. Public-sector values, collective bargaining, and school district oversight may be beneficial to schools' climates.

This dissertation underscores the impact management and funding structures have on school climate. The author recommends that the school climate concept and evaluations of schools' organizational practices be incorporated into school improvement policies. The milieu, culture, ecology, and organizational structures of schools should be reviewed when assessing school quality.



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# **CHAPTER I**

## **INTRODUCTION**

Chapter 1 introduces the background, purpose, and significance of the study. The research questions, the hypotheses, and the theoretical framework that guided this dissertation are presented. An overview of this study's methodology, its limitations, and the generalizability of the findings are discussed.

The background of the study is subdivided into three sections. The first section discusses charter schools and school choice. The second section discusses school autonomy. The third section discusses school climate.

### **Charter Schools and School Choice**

The charter school movement is based on the premise of greater autonomy from local authorities and state governments. Prospects of local site-based management and increases in school performance propelled the rapid growth of charter schools. How autonomous charter schools are is dependent on the regulations of the school districts and states that they reside in. They are afforded greater autonomy from school districts than traditional public schools, which come under the direct purview of school districts.

Traditional public schools are funded and managed by the school districts. Charter schools are funded through a school voucher system, so that they are publicly funded, but privately operated. A charter school functions under a charter with the school board or some other authorizer, which delineates its management, curriculum, funding, and other functions. The charter also stipulates performance goals that a school must meet, with academic and financial measures being commonly employed. Failure to meet the goals

outlined in a charter can result in the school being reprimanded, which could include the non-renewal of its charter. A charter school is held accountable not just to its authorizers, but also to “parents who can choose whether to enroll children in a charter school, teachers who choose whether or not to work in a charter school, and community members who donate needed money, goods, and services” (Hill, Lake, & Celio, 2002, p. 3).

Both traditional public schools and charter schools are universally accessible to all students with few exceptions. Traditional public schools are open only to students that live within its designated attendance boundaries. Charter schools do not have attendance boundaries and are open to all children in the school district with some reservations. When student applications to charter schools exceed their enrollment capacities, a lottery process is used to randomly select the students that will attend.

Due to their relative independence from school districts and states, charter schools “are more dependent on outside entities than are traditional public schools” (Hill, Lake, & Celio, 2002, p. 64). Many charter schools rely on partner organizations, such as community nonprofit organizations, to assist with providing services like after-school programs and administrative functions. Even though charter schools commonly receive the same per-pupil funding that district-run public schools do, they often do not get the same amount of funding for things not covered by general education funds such as facility costs. Charter schools often rely on external sources of funding, like government grants and bank loans, for uncovered expenses. They will often turn to community nonprofit organizations to help secure grants and loans. Some charter schools forego government grants in order to maintain their autonomy. Charter schools receiving less funding from school districts is not always detrimental to their academic performance.

Flaker (2014), for instance, demonstrated that charter schools in Massachusetts actually outperformed traditional public schools academically while receiving less funding per pupil. Less funding from school districts does frequently result in charter schools not providing certain amenities such as student transportation and school safety officers. Most states do not require charter schools to have school safety officers or provide student transportation.

Charter schools could be organizationally under Educational Management Organizations (EMOs) or Charter Management Organizations (CMOs), which operate across several districts (Peterson, 2006). EMOs are for-profit organizations that manage multiple charter schools. CMOs are similar to EMOs except that they are non-profit. Charter schools often turn to EMOs or CMOs to overcome financial and administrative hurdles. Due to economies of scale, EMOs and CMOs are able to reduce per-student costs as their scale of operation increases. However, as observed by Bulkley (2005), charter schools affiliated with EMOs or CMOs sacrifice a certain degree of on-site autonomy. The degree of on-site autonomy that is sacrificed is dependent on the degree of decision-making that an EMO or CMO exerts over a charter school. The utilization of EMOs or CMOs potentially undermines the premise of locally-run schools extolled by charter school advocates.

The first charter school opened its doors in 1992 in Minnesota. Charter schools have become more prominent since the No Child Left behind Act increased funding towards charter schools. From 2001 to 2006, more than 1.4 billion dollars was invested towards the Charter Schools Program and more than \$262 million was invested towards the development of charter school facilities (U.S. Department of Education, 2007). From

2000 to 2013, the percentage of public schools that were charter schools grew from 1.7 to 6.2 percent. There are currently 6,633 charter schools in operation nationwide. Forty-two states have charter schools. California has the largest number of charter schools, at 1,184, and it has the highest number of students enrolled in charter schools, at 544,980. However, Arizona has the highest percent of its public students enrolled in charter schools, at 14% (National Center for Education Statistics, 2016).

There were more students enrolled in independently-run charter schools than the combined number of students enrolled in EMO and CMO affiliated charter schools in 2014. There were 1,216,244 students enrolled in independently-run charter schools, 560,548 enrolled in a CMO-affiliated charter school, and 519,256 enrolled in an EMO-affiliated charter school (National Alliance for Public Charter Schools, 2017). Seventy-four percent of the nation's EMO-affiliated charter schools were located in four states in 2014: Michigan, Florida, Arizona, and Ohio. Seventy-seven percent of the nation's CMO-affiliated charter schools were located in two states in 2014: Texas and California. The percentage of charter schools affiliated with EMOs and CMOs is steadily increasing.

The rise of charter schools has brought market mechanisms such as consumer choice and competition into the public education system. Parents are the consumers; they choose the schools their children will attend. With market pressures present in the education system, charter schools, private schools, and district-run public schools compete for enrollment. When students transfer from traditional public schools into charter schools, the declines in enrollment are accompanied by losses in funding, sometimes resulting in cutbacks in the number of teachers, staff, and administrative personnel (Bohte, 2004). Proponents of market theory claim that competition incentivizes



schools to adopt optimal policies. Schools that fail to adapt will lose students to their competitors. Extant research, though, has shown that charter schools have improved upon marketing strategies, but not instruction (Good & Braden 2000; Murphy & Shiffman 2002; Bulkley & Fisler 2003; Lubienski 2003, 2004). Charter schools are becoming increasingly market-oriented as more of them are founded under EMOs. They are being transformed from communal experiences, where on-site management, shared community values, and teacher empowerment are venerated, to business entities that value profitability and efficiency. Charter schools that are under EMOs are else likely to exhibit decision-making control at the school-level (Henig et al., 2005)

Since charter schools are neither wholly public nor private, it is paramount that charter schools be examined through a public-private spectrum rather than through a dichotomy. Whitty and Power (2000) developed the means with which to determine the publicness of an organization. Their method makes a determination by examining an organization’s source of funding and the actors responsible for the provision of services. Charter schools would be positioned in quadrant 2 of Table 1 since they largely receive funding from the public sector, but private sector actors are largely responsible for providing educational services. Traditional public schools, in contrast, would be positioned in quadrant 1 as the public sector is responsible for both the funding and the provision of educational services.

**Table 1. Public-Private Classification Continuum**

Funding	Provision	
	Public	Private
Public	1	2
Private	3	4

Lubienski (2013) observed that charter schools do function like private entities. Charter schools have profit-seeking motives. Their profit-seeking behavior is manifested in their attempts to limit access for less-desirable students. Charter schools dissuade parents from enrolling children that have special needs and disabilities. Students with special needs and disabilities incur greater costs and are associated with lower performance. While Estes (2004) did not find evidence of overt discrimination against children with disabilities, some of the charter schools in her study had inadequate wheelchair accessibility, legally excluded students with a history of behavioral issues (based on Texas statutes), and lacked special needs expertise. On average, special needs children make up only 8 to 10 percent of the students in charter schools, fewer than the 13.1 percent figure for traditional public schools (Miron, 2014). The majority of children with severe disabilities that attend charter schools in Florida are concentrated in a handful of charter schools that specialize in those handicaps (O'Connor & Gonzalez, 2011). Those specialty charter schools are invested in a niche market that the majority of charter schools are ill-equipped to serve.

Most charter schools avoid serving at-risk students given that accountability is tied to student performance. Charter schools can limit the enrollment of less desirable students through their location, market niche, marketing and advertising, application processes, disregard for regulations, enrollment conditions, dissuasion tactics, discipline policies, grade retention policies, counseling, enrollment policies during the academic year, and unavailability of services for specific groups (Welner, 2013). The enrollment of disadvantaged children can be limited by positioning a charter school's location far from

disadvantaged families and by not providing student transportation. For-profit charter schools often game the system much like private businesses.

Private organizations are becoming increasingly involved in public education. The private sector is already heavily involved in the development of curricula, assessments, and pedagogy in public education (Hursh & Martina, 2016). The privatization of education is rooted in neoliberalism. Through market mechanisms and the abolishment of the public sector's monopoly on education, it is alleged that public education will become more efficient and effective. Charter schools are being used by external actors as a medium to further privatize public education. Multibillionaires like Bill Gates, John T. Walton, and Donald Fisher have used their wealth to drive legislation favorable towards charter schools, with the aim of putting education in corporatist's hands. Skeptics of the neoliberal movement allege that privatization will not resolve the present problems of education. Instead, they claim that having a social democratic system in education, where decision-making is left to not just bureaucrats or corporatists but to citizens as well, is the path that education reform must take. Charter schools, though, have the opportunity to instill values of social democracy such as citizen-participation when their school districts eschew them. They also have the discretion to stifle them.

Charter schools have greatly propelled the school choice movement along with “vouchers, tax-credit scholarships, magnet schools, virtual schools, education savings accounts, and innumerable “open-enrollment schemes” ” (Finn & Manno, 2015, p.3). Magnet schools, however, were the first schools of choice to emerge. They came into the scene in the late 1960s. They were established to promote racial integration by permitting students to enroll regardless of where they resided in the school district. Magnet schools

have grown considerably in number ever since the federal courts (most notably, *Morgan v. Kerrigan*, 1976) deemed them to be an acceptable method of desegregation. Magnet schools tend to have a special curricular focus like on STEM, the arts, and vocational trades. Some magnet schools have become competitive, allowing only the top-performing students to enroll. Unlike charter schools, magnet schools are operated by the school district. Magnet schools are typically more racially diverse than their traditional counterparts. Enrollments are commonly managed to ensure racial diversity (Goldring & Smrekar, 2000). Students in magnet schools, however, are more likely to come from high-socioeconomic backgrounds and households with two parents (Chen, 2017). Magnet schools have high academic performance relative to traditional public schools. Though, like with charter schools, this academic performance is commonly attributed to the magnet schools' student demographics (Adcock & Phillips, 2000).

Another prominent medium for the school choice movement was the introduction of the school voucher system. A school voucher is a subsidy from the government that can be applied towards a private school. Milton Friedman's "The Role of Government in Education" (1955) spurred the school voucher system and the school choice movement in general. He argued that parents should be granted subsidies towards the educational institution of their own choosing. He found it unjust for parents wishing to enroll their children into alternative, private schools to have to pay twice-over for education; their taxes towards public education in addition to the tuition charged by private institutions. Friedman promoted the notion that the government should only be financing the education system, not administering it, drawing analogies towards other sectors. In 1989,

Wisconsin became the first state to implement a voucher system. Presently, 12 states and the District of Columbia have a school voucher system.

The school voucher system has helped private schools to grow in number. About 25% of all US schools are private schools (33,366) and about 10% of US students (5,488,000) are enrolled in a private school. The majority of private school students go to a religious school, with Catholic schools being the most attended private school; 42.9% of all private students attend a Catholic school. Private schools are considerably smaller than most public schools, with 87% of private schools having fewer than 300 students. Private students tend to perform better in subject areas like math and reading and standardized testing than public school students. However, the greater academic performance of private schools could be attributed to private school students coming from higher socio-economic backgrounds. The average tuition of private schools is \$10,740, which would be financially prohibitive to most US families without some government assistance. While private schools are prevalent, they are no longer the primary means of privatizing education. Charter schools have supplanted private schools as the dominant driver of the school choice movement.

While school choice does increase schooling options, critics are concerned that the movement will lead to a disintegrated school system based on race, ethnicity, language, religion, and socioeconomic status; divert much-needed funds from public schools; reduce accountability; and deteriorate education quality. Studies such as those by Ladd (2002) and Wolf et al. (2009) found that school choice and voucher systems, at best, only marginally increased student performance. For school choice to be beneficial, complete information must be readily available to parents. Parents often do not have

complete information when choosing schools and do not actively consider many options when making decisions (Gorard, 1997). Parents choose alternative schools based on quality and distance, with distance being particularly important for those with low incomes (Chumacero et al., 2011). Many alternative schools do not provide transportation for its students. Families with low socioeconomic status are the least likely to benefit from school choice as they are most likely to be uninformed about schooling options and are often unable to provide private transportation (Kelly, 2007). As a consequence, school choice could exacerbate the gap between social classes and inhibit social mobility (Woods et al., 1998).

Advocates tout that school choice reduces the cost of education, allows parents to choose the type of education their children will receive, permits students to be transferred from underperforming schools, reduces social inequality, and improves academic performance (Moore & Davenport, 1990). Evidence from Germany and France suggest that school choice benefits the disadvantaged the most (Glenn, 1989). Deming et al. (2014) found that students who won the lottery for their first-choice school were more likely to graduate high school, attend postsecondary schools, and obtain college degrees. Hastings et al. (2012) demonstrated that after winning the lottery, the winners had lower truancy rates and improved test scores. School choice has also generated greater collaboration between schools and pivotal actors like parents, communities, vendors, local education authorities, and other schools (Morrison, 2002).

Charter schools are the crux of the school choice movement. Whether the movement results in success will be primarily determined by charter school performance. A meta-analysis of academic performance studies by Betts and Tang (2016)

demonstrated that charter schools generally produce higher achievement gains in math relative to traditional public schools, but not for reading. The estimated effects of school-type on performance are highly variable, though, most likely due to variations in school quality among the schools sampled.

There has also been research conducted to determine whether the expansion of the school choice system will benefit traditional public schools. The rationale being that a market system pressures schools to improve. The influence of school choice on school district performance has been mixed, with some studies demonstrating increases in student performance district-wide (Holmes et al., 2006), while other studies showing no effect (Zimmer & Buddin, 2009). The progression of the school choice movement hinges on alternative schools' performances, their relationships with external parties such as local communities and education institutions, and how the paradoxical education system of the United States evolves over time.

### **School Autonomy**

Traditional public schools are under the purview of a school district. School districts heavily govern their operations. Charter schools also fall under the purview of a school district. Unlike traditional public schools, charter schools are commonly “developed and managed by individuals or groups of parents, community members, teachers, or education management organizations” (Renzulli & Roscigno, 2005, p. 345). Charter schools are governed by less local and state regulations than traditional public schools. With charter schools, authority is more decentralized. These circumstances permit the owners of charter schools to grant site-based autonomy to their schools. With sufficient autonomy, site-based administrators and staff have the power to affect a wide

range of school policies such as disciplinary practices, curricula, and parental involvement.

School autonomy and accountability are intertwined. As schools become more autonomous, accountability becomes individualized (Hill & Bonan, 1991). Principals become more accountable for their school's performance when they have the authoritative capacity to impact it. Site-based autonomy can empower administrators by bestowing them discretionary power over functions that impact the performance of their schools. A common issue with district-run public schools is that the principals do not have authority over functions pertinent to student performance, such as with hiring and curricula, yet they are held accountable for their schools' performance. By giving principals more autonomy, this gap between authority and accountability can be rectified (Adamowski & Petrilli, 2007). Site-based autonomy also makes administrators more accessible to denizens. Site-based management increases the proximity between policy-makers and the community, strengthening accountability. Additionally, community mandates are more likely to be incorporated in a decentralized system of site-managed schools. Local policy-makers generally have a superior knowledge of the needs of their schools and community.

Uniform standards are more difficult to maintain in a decentralized system, however. National goals become more challenging to accomplish when curricula is decentralized. The United States' educational reforms have been paradoxical with regards to achieving its national education goals. US polity has promoted nationalized curricula and assessments while simultaneously pushing for further decentralization within local school districts. This mix of centralization and decentralization reforms mirror that of



many other nations, with the significant difference being that the United States is implementing these reforms within a decentralized system (Astiz et al., 2002). Other nations' education systems are far more centralized. These reforms will change the nature of how accountability will function. A system of autonomous schools that is still under the purview of a central entity requires a reimagining of how accountability is to be enacted. To realize national education goals while simultaneously respecting local interests is a challenging endeavor.

School autonomy is multifaceted and variable. Two schools can both have site-based autonomy, yet differ in the areas they have policy-making authority over. Such variability makes defining an autonomous school difficult. In what areas must a school have policy-making authority over to be classified as an autonomous school? Are some areas more pertinent for a school to be autonomous than others? Some authors' studies of autonomy are limited to specific concepts such as classroom autonomy (Crawford, 2001) or control over staff retention and termination (Wells, 1998). Other studies of school autonomy are more encompassing and multidimensional (Bulkley & Fidler, 2003). An accepted definition of school autonomy remains elusive.

The degree of autonomy a charter school can express is dependent on the jurisdiction the school occupies, its authorizers, and its management structure. The variability in site-based management among charter schools stems from this. State and university authorizers permit more autonomy than local education agencies (Anderson et al., 2000). EMO affiliated charter schools and district-run public schools generally have less site-based autonomy than independently-run charter schools (Finnigan, 2007). States' regulations impact school autonomy. For example, some states permit charter

schools to hire teachers that lack certain certifications, while not granting the same privilege to traditional public schools. In such states, charter schools can expand their applicant pool to include teachers that lack certain qualifications.

There is a great deal of variability in organizational autonomy between charter schools and within a charter school over time. Finnigan (2007) found that the autonomy of some charter schools decreased over time. It was also found that the “degree of autonomy of a charter school is closely linked to the type of authorizer, whether the school is newly created or a conversion school, and the extent to which the school has a partnership with an EMO or CMO” (Finnigan, 2007, p. 511). There is significant variability in the degree of control charter schools have over personnel, curricula, assessments, and budgeting matters. Charter schools, though, are generally going to have high control over matters related to personnel, curricula, and assessments, but low control over budget matters. Charter schools may forego bestowing significant autonomy to its administrators and teachers even when regulations permit them to.

Variances in autonomy has led to organizational practices differing between district-run public schools and charter schools. Principals play a pivotal role in organizational behavior. Generally, principals of charter schools have more autonomy relative to their traditional public school counterparts. They have greater influence on hiring teachers, discipline policy, school spending, teacher evaluations, standards, and curricula (Gawlik, 2008; Triant, 2001). In autonomous environments, principals can become transformational leaders. A transformational leader is able to create successes for an organization by implementing new visions and committing the subordinates to those visions. Having less autonomy, principals of traditional public schools have more barriers

to overcome in becoming transformational leaders. An administrator cannot become a transformational leader just by being in a favorable environment, though. The administrator must also have characteristics necessary to become a transformational leader. They must have high emotional intelligence. Individuals with high emotional intelligence are charismatic, inspire motivation, and have individualized consideration (Barling et al., 2000). These three attributes are key aspects of being a transformational leader. Leithwood and Jantzi (2000) demonstrated that transformational leadership has a significant effect on organizational conditions and student engagement. With greater liberties in hiring, charter schools are more apt to hire administrators with such characteristics.

Site-based autonomy can result in managers becoming more motivated and productive. Porter's hierarchy of needs, an alteration to Maslow's hierarchy, theorizes that autonomy is necessary for managers to become self-actualized. In Porter's concept, when managers feel a sense of security, affiliation, self-esteem, and autonomy, they become self-actualized. Self-actualization is a state of feeling successful at work, working at full potential, and achieving goals viewed as significant (Owens, 1991). An autonomous manager has control of the work environment, is influential, participates in significant decisions, and has the authority to utilize organizational resources. Administrators and teachers have been found to be more empowered when given general autonomy (Pearson & Moomaw, 2005). Autonomy is correlated with job satisfaction (Brunetti, 2001; Kim & Loadman, 1994; Klecker & Loadman, 1996; Ulriksen, 1996). While teachers vary in their desire to participate in school management, there is a more

unanimous desire to have classroom autonomy (Frase & Sorenson, 1992). Classroom autonomy is instrumental in preventing teacher turnover (Brunetti, 2001).

With school-based management, there is the potential for strategies and innovations linked to student performance to be implemented. When schools do have site-based authority over staffing policies, student performance tends to increase (Wöbmann et al., 2007). Some studies, however, have found that school-based management at best only marginally improved instruction (Malen et al., 1990; Smylie, 1994). While teacher and parent involvement in decision-making increased, these decisions were often found to be inconsequential (Clune & White, 1988; Lieberman, Darling-Hammond, & Zuckerman, 1991). Autonomy in policies where opportunistic behavior is likely, such as budgeting, tends to be associated with decreased student performance (Wöbmann et al., 2007). Some studies did find positive indirect effects of autonomy on instruction, notably through increased teacher participation in decision-making, job satisfaction, morale, and commitment to improving instruction (Hannaway, 1993; Smylie, 1994).

Staff autonomy could hinder instruction when teachers become absorbed by administrative duties (Hannaway, 1993; Smylie, 1994). Such administrative duties involve an increase in paperwork. The teacher's reward for performing paperwork is often times more paperwork. They become trapped in perpetual paperwork as instruction becomes neglected. Too much autonomy afforded to staff can also result in coordination being impeded, hampering a school's efforts in meeting its organizational goals (Morrison, 2002). It is not uncommon for charter school teachers to take on administrative duties. Charter school teachers on average work more hours than

traditional public school teachers and administrative duties could contribute to this statistic. Roch and Sai (2017) found lower levels of teacher job satisfaction and professional development in charter schools than traditional public schools, especially with EMO-run charter schools. Additionally, charter school teachers are substantially less likely to be unionized than their traditional public school teachers, with 88% of charter schools not being unionized in the United States (Jha & Buckingham, 2015). This is due to charter schools in most states not having a legal obligation to be unionized. Roch and Sai (2017) did find, though, that teachers had greater autonomy within their classrooms and more support from parents in charter schools, particularly those not run by EMOs.

The autonomous nature of charter schools permits them the opportunity to experiment and innovate. In reality, the innovation has largely been confined to their administrative practices; innovation in classroom instruction has been lacking. Miron and Nelson (2002) found in their study that only 46% of the sampled teachers found available professional opportunities in their charter schools to be new or innovative, even though 68% of the sampled teachers said they had autonomy in the classroom. Preston et al. (2012) found that administrative innovation in charter schools was limited to tenure and student grouping strategies, such as looping and mixed age or multi-grade classrooms.

The lack of innovation could be attributed to charter schools' exposure to the volatile demands of the free market. Innovation requires capital and time. Failure might be too costly of a risk, especially for recently established charter schools. Unsuccessful innovations can harm school performance, organizational reputation, and profits. As a result, charter schools have been found to avoid innovative practices and embrace traditional approaches instead. Parents are also typically keener to proven practices than

they are with innovative ones. Charter schools are more likely to imitate the practices of traditional public schools than to generate new ones. Innovation is more likely to occur with administrative practices and in marketing rather than in pedagogy as the risk-reward is more attractive with the former than the latter.

### **School Climate**

There is a lack of consensus on how school climate is defined and the parameters with which to measure it. Freiberg and Stein (1999) abstractly define school climate as “the heart and soul of the school. It is about that essence of a school that leads a child, a teacher, and an administrator to love the school and to look forward to being there each school day” (p. 11). Other scholars more concretely define school climate “as the shared beliefs, values, and attitudes that shape interactions between students and adults and set the parameters of acceptable behavior and norms for the school” (Wang & Degol, 2016, p. 316). Cohen et al. (2009) defined school climate as “the quality and character of school life; [it] is based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (p. 182). Haynes, Emmons, and Ben-Avie (1997) defined school climate as the quality of the school context which is influenced by the quality of school staff support and “the quality of interactions among and between students and teachers” (p. 322).

Broadly, school climate refers to the atmosphere, tone, feeling, setting, character, and social milieu of schools. A myriad of internal and external factors influence the school experience of students and staff, consciously and unconsciously. Often, these factors affect perceptions of school life not just for a select few individuals, but the entire

school body. The physical environment and organizational patterns impact the entire school. Factors external to the school like school district processes, family household experiences, and the community also play a role. School climate becomes more meaningful when it is thought of as a group phenomenon that is larger than the sum of all individual experiences.

While there is as of yet no universally agreed upon definition of school climate, there are four dimensions of school climate that the school climate literature frequently eludes to. Wang & Degol (2016) identified the four dimensions of school climate: order and safety, academic climate, connectedness, and the institutional environment. Order and safety is the degree of physical and emotional security provided by the school. Academic climate refers to the teaching and learning practices promoted in the school. Connectedness pertains to the quality of the interpersonal relationships present in a school. The institutional environment is defined by the organizational or structural aspects of a school. “Collectively, these four dimensions encompass just about every feature of the school environment that impacts student cognitive, behavioral, and psychological development” (Wang & Degol, 2016, p. 317). The National School Climate Center has recognized these four dimensions of school climate and recommends that assessments of school climate include these dimensions.

The climate of a school is commonly measured through self-reported surveys. Teacher-student relationships, student-peer relationships, order and safety, environmental and school-building characteristics, parent involvement, support, fairness of rules, and school connectedness all influence perceptions of school climate and are generally assessed for in self-reported school climate surveys. Researchers, like Zullig et al. (2014),

have substantiated the reliability and validity of school climate surveys. School climate surveys have been demonstrated to sufficiently capture the four dimensions that encompass the concept of school climate.

School climate has a profound impact on the welfare and functionality of students. Negative school climates have been linked to increased affiliation with deviant peers, weaker bonds to their schools, and even internet addiction (Li et al., 2016). Students attending schools with positive climates are less likely to show anxiety and hyper-vigilance for school violence or peer victimization (Peterson & Skiba, 2001). School climate affects sleep quality and adolescent suicidality (Li et al., 2015). Attendance is strongly associated with school climate, with negative school climates fostering greater absenteeism among students (Haynes, Emmons, & Ben-Avie, 1997). School climate influences students' well-being, academic performance, interpersonal relationships, and degree of satisfaction with their school institutions.

Comparative studies of school quality have generally shown that parents, students, and teachers find the quality of charter schools to be superior to that of traditional public schools. Finn et al. (1997) found that parents and students were more satisfied with charter schools than the traditional public schools that the students transferred from. Schneider and Buckley (2003) found that parents of children in charter schools were more satisfied with their schools relative to parents of children in traditional public schools. Their study controlled for self-selection into charter schools and their results are not simply the outcome of the act of choosing. Teachers are also generally more satisfied with charter schools (Koppich, Holmes, & Plecki, 1998). Roch and Sai



(2017), however, found charter school teachers to be less satisfied with their jobs than traditional public school teachers.

School climate has been around as a concept for over 100 years. Perry first explicitly discussed it and its effects on student academia in 1908 (Cohen & Geier, 2010). School climate studies became more prominent when organizational studies on school effectiveness were undertaken (Anderson, 1982; Purkey & Smith, 1983; Miller & Fredericks, 1990; Kreft, 1993; Creemers & Reezigt, 1999). School climate is a subtype of the general concept of organizational climate. The Western Electric research of the 1930s made organizational climate a prominent research topic (Owens, 1991). Organizational climate is the culmination of workers' perceptions, values, and beliefs about their organization and their impact on organizational events and outcomes.

Organizational climate is composed of four dimensions: ecology, milieu, organizational structure, and culture (Tagiuri, 1968; Owens, 1991). Ecology refers to the physical and material factors in organizations. Examples of ecology include school facilities, learning supplies, and the technology present. Milieu involves the social characteristics of the people within organizations. Examples of milieu include school demographics, teacher morale, and student motivation. Organizational structure pertains to the organizational and administrative structures of organizations. Communication patterns, how are decisions made and who is involved in making them, and how the school is organized are factors related to organizational structure. Culture refers to the values, belief systems, norms, and ways of thinking present in organizations. Culture influences how things are done and how people think within organizations.

An analysis of an organization's climate can give insight as to how the organization functions and performs. For instance, the openness of an organization will determine how effectively changes to an organization can be implemented. Halpin (1966) suggested that an open climate is the climate most conducive to change. An open climate is one characterized by cooperation, high morale, high job satisfaction, high motivation, openness, minimal red tape, mutual respect for all employees, and a feeling of genuineness (Morrison, 2002). A closed climate, the climate least conducive to change, is characterized by low morale, little incentives for change, little sense of involvement, inflexibility, and a leadership that does not set good examples.

Organizational climate studies place a greater emphasis on organizational processes and structures. Their primary focus is on the staff and administrators of an organization. This is because the performance of most organizations can be mostly attributed to the productivity of its staff and administrators, and less so by its clientele. Contemporary school climate studies, in contrast, are primarily focused on the students rather than school staff and administrators. This is due to the uniqueness of schools as public organizations; schools' performances are impacted more so by the clientele they serve (the students) relative to other public organizations.

School climate must be analyzed from the viewpoint of the staff and students in order to obtain a complete illustration of school life. The experiences of students differ from staff, which could result in divergent opinions on school quality. Divergent opinions could indicate disconnect between students and staff, a lack of staff awareness of student ordeals. Convergent perspectives can indicate not only strong staff awareness, but also establish the validity of student and staff self-reported data via triangulation.

The organizational climates of schools cannot be adequately explored using just public administration concepts. Education concepts must also be incorporated due to the idiosyncrasies of schools as public organizations. This dissertation utilizes general concepts of organizational climate in conjunction with concepts more specific to school climate in order to effectively analyze the climates of district-run public schools and charter schools.

### **Purpose and Significance**

The purpose of this dissertation is to investigate the factors that influence school climate. Whereas extant studies have focused on the benefits, there is a large research gap of such factors influencing school climate. Also, as Thapa et al. (2013) argue in their extensive review, the majority of extant studies do not examine school climate over time or within multilevel/hierarchical frameworks. Furthermore, school climate studies have overtly focused on traditional public schools, neglecting charter schools. Lubienski et al. (2008) did compare various school-types on student achievement and some school climate dimensions. However, their study was limited to only one year, lacked several school climate dimensions, and did not perform significance testing of school climate dimensions by school-type. The study only provided descriptives of the school climate components by school-type in the form of composite z-scores, not controlling for other factors such as school membership size and demographics. This dissertation seeks to advance our understanding of the distinctive aspects of school climate in the public education system vis-à-vis school-type comparative analyses.

This dissertation also seeks to augment the comparative literature on district-run public schools and charter schools. The majority of analyses focus exclusively on school-

type dissimilarities in school performance. School climate and school performance share a reciprocal relationship. By incorporating school climate, the underlying processes that cause performance variances can be better understood. Sectoral distinctions in ownership and autonomy have resulted in dissimilar management and funding structures. Such organizational dissimilarities impact school performance. Their influence on school performance is mediated through their effect on schools' milieus, cultures, ecologies, and organizational structures. Through the inclusion of the school climate concept, our understanding of how organizational practices impact education will advance substantially.

### **Research Questions and Hypotheses**

This study addresses two principal research questions.

- 1.) What organizational factors influence school climate? The hypothesis is that the four aspects of organizational climate (milieu, ecology, culture, and organizational structure) will influence school climate. While the factors that influence students' and staffs' perceptions of school climate are dissimilar, it is expected that all four organizational climate constructs will influence both students' and staffs' perceptions.
- 2.) How does school climate vary between charter schools and district-run public schools? While the research question is exploratory, the intent of the question is to explain the dissimilarities (if any) in school climate between the school-types. The hypothesis is that variances in management and funding structures will result in significant differences in school climate between the school-types.

## **Theoretical Framework**

Organizational practices differ between public and private organizations (Rainey et al., 1976). Simon, Smithburg, and Thompson (1991) observed that the distinctions between public and private organizations stem from the political characteristic of public organizations. This distinction results in fundamental differences in their market structures, externalities, ownership transferability, internal structures and processes, organization-environment transactions, and environmental factors (Niskanen, 1971; Rainey et al., 1976). The success of public organizations is not determined by market signals, but rather on nonmarket signals like budgetary growth. Private sector managers have a greater incentive to efficiently use the resources of the organizations due to their personal gains being directly tied to the economic returns of their organization.

Although charter schools' budget growth is tied to student enrollment size much like district-run public schools, charter schools have greater discretion on how the budget is allocated. This results in charter school administrators having greater accountability over their schools' performances and greater incentives to improve school performance. Increased exposure to market-like incentives, however, will not necessarily result in meaningful changes to schools' organizational climates. Schools can respond to competitive markets by promoting favorable, symbolic images of their organizations rather than making substantive changes to their educational processes (Lubienski, 2005). Promotional activities can even artificially increase the academic performances of schools when families of higher-achieving students are specifically targeted. The charter school movement has resulted in innovations in school marketing, but there is a lack of evidence that charter schools have affected teaching and learning practices (Good &

Braden 2000; Murphy & Shiffman 2002; Bulkley & Fisler 2003; Lubienski 2003, 2004). Students, teachers, and parents, though, have generally reported greater satisfaction with charter schools, indicating better school quality (Finn et al., 1997; Koppich, Holmes, & Plecki, 1998; Schneider & Buckley, 2003). It is plausible that the introduction of market mechanisms into the education system have improved the organizational climates of schools, but whether the improvements are the result of meaningful changes to organizational practices is unclear.

Public and private organizations also differ on how they are legally and politically constrained by the government. Public organizations are more restricted and controlled by the government. Thus, district-run public schools have less autonomy and flexibility than charter schools. This public-private distinction could impact organizational practices and with it, students' and teachers' school climate perceptions. Students' school climate perceptions are more influenced by school-level factors such as student mobility, student-teacher ratio, faculty turn-over, and principal changes, whereas teachers' school climate perceptions are more influenced by classroom-level factors such as the age of the teachers, classroom management, and student behavior (Mitchell et al., 2010). Sectoral distinctions could impact both school-level and classroom-level factors; school autonomy would affect many of the aforementioned factors. Therefore, it is difficult to theorize whether school-type has a larger effect on students' perceptions or teachers' perceptions, assuming school-type even has an effect on perception. Teachers are more cognizant of their schools' organizational practices, so it is plausible that school-type would have a more significant influence on teachers' perceptions.

Charter schools exhibit much of the same characteristics of a private sector entity. Ownership transferability is possible with charter schools whereas it rarely occurs with district-run public schools (public schools can be converted into charter schools, effectively transferring ownership from the school district to the private-sector). Charter schools engage in marketing and commonly have performance-based incentives that district-run public schools lack. The management styles of the schools are distinctive. The activities of employees (administrators, staff, and teachers) differ between the school-types.

Principals of charter schools have more control over teacher recruitment and pay and are more likely to adopt a team model. A team model leads to teachers having better relationships with school administrators, greater adherence to organizational missions and visions, and more cooperative arrangements (Podgursky, 2006). Charter school teachers have more influence over academic standards and curricula. The greater onsite autonomy afforded to charter school principals and teachers can lead to increased job satisfaction and performance among the employees. The dissimilarities in personnel policies and behavior are the result of charter schools employing a more decentralized system. Under the purview of school district offices and unions, school-level administrators in traditional public schools cannot adjust personnel policies or employ market or performance-based pay. This results in a labor force that is standardized and has more horizontal equity, diminishing the incentive for personnel to improve. The public-private distinction is theoretically crucial to schools, creating variations in organizational practices.

This author theorizes that variations in organizational practices leads to organizational climates being dissimilar between school-types. Extant studies demonstrate that differences in organizational practices result in distinctive organizational climates (Buchanan, 1974; Solomon, 1986; Garcia et al., 2014). District-run public schools and charter schools could be distinctive along the four dimensions of organizational climate: milieu, ecology, culture, and organizational structure (Owens, 1991; Tagiuri, 1968). Differences in school autonomy and marketplace exposure could cause variations along these constructs.

Milieu refers to internal organizational features of teachers, students, and personnel. The characteristics of the students and staff have important implications for a school such as its culture, adherence to mission statements, and performance. Traditional public schools generally have lower rates of minority students, urban students, and students from low-socio-economic backgrounds (Lubienski, 2008). Charter schools have lower rates of credentialed and experienced teachers (National Center for Education Statistics, 2016). The demographic differences could be an outcome made deliberate by charter schools through conscious decision-making such as with their geographic locations, hiring and retention practices, and marketing. The public-private distinction is theoretically salient for variations in milieu based on school-type.

Ecology pertains to the quality of the physical environment. School-type may have a significant bearing on the condition of the school facilities and the quality of the physical resources present. Variations in organizational practices and demographics could result in the school environment and its resources being treated differently. Charter schools' budgeting, access to private financing, general lack of direct public funding



towards the construction or purchase of school facilities, and greater likelihood of moving into pre-existing buildings (Imberman, 2011a) can lead to variations in ecological quality between the school-types.

Culture is the organizational norms, beliefs, and values. The culture of an organization is shaped by its people and its people are shaped by its culture. The school choice movement was spawned partially out of educators' dissatisfaction towards traditional public schools' organizational culture. Many charter schools were established as a community grass roots response to the bureaucratic culture of the public school system. The philosophy of many charter schools is to rectify assumed deficiencies in the traditional public school system. The parents of charter school students are generally more involved in the activities of the schools, having a greater influence on the schools' culture. Venture philanthropists, too, have shaped the culture of charter schools through the introduction of neoliberal values (Scott, 2009). The value orientation of charter schools could be similar to that of private-sector organizations whereas the value orientation of district-run public schools could be more akin to government organizations. Private-sector organizations value profitability, innovativeness, and honesty more, whereas, government organizations value lawfulness, incorrigibility, and impartiality more (Van der Wal et al., 2008). Such distinctions in value systems would lead to cultural divergence. The organizational cultures of the school-types are theoretically dissimilar as a result of different value systems and the idiosyncrasies of their individuals and groups.

Organizational structure involves the organizational and administrative structures of organizations. Having autonomy from the school district, there is expected to be more variability among charter schools in how they are organizationally structured, much like

how private-sector organizations have more structural variability than public-sector organizations (Grubbs, 2000). Less government oversight often results in less standardization. Being entrenched in the private-sector, charter schools' organizational structures are heavily influenced by economic markets. For instance, charter schools in favorable economic conditions may be less inclined to join an EMO network, thus keeping its hierarchy flat. District-run public schools, in the absence of an economic market, should have more elaborate hierarchies, be more rigid, and be more influenced by political forces. Being public organizations, traditional public schools' personnel procedures should be more highly centralized or externally controlled, with authority being more concentrated at the top (Perry & Rainey, 1988).

### **Overview of Methodology**

To determine the influential extent of each organizational factor on perceived school climate, secondary confirmatory analysis was utilized to construct two structural equation models, a student-perceived school climate model and a staff-perceived school climate model. Factors related to milieu, culture, ecology, and organizational structure were incorporated into the models. Survey items from the student and staff versions of the Annual School Climate Survey were used to model the latent organizational and school climate constructs. Data covering 15 years, from academic years 2001-2002 through 2015-2016, were used for structural equation modeling.

The survey results are aggregated at the school level. Each year, students from randomly-selected classrooms in participating schools voluntarily complete the survey. Eligible staff in participating schools voluntarily complete their version of the survey. Every district-run public school and charter school must distribute the survey materials

annually. The majority of district-run public high schools and charter high schools in Miami-Dade school district were utilized for this study.

Within-between effects panel regression models were utilized to test for the effect of school-type on students' and staffs' perceptions of school climate. The effect of school-type is measured through binary variables that identifies schools based on whether they are a traditional public school, a magnet school, or a charter school. Panel regressions were run separately on each of the proxy measures for milieu, culture, ecology, organizational structure, and overall school climate. The proxy measures were each individually regressed on the independent and control variables. Each proxy measure has their own section devoted to their analysis within the results section of this dissertation. Data from 2005-2006 through 2015-2016 were used for the regressions.

### **Delimitations of the Study**

The researcher chose to perform his study on district-run public high schools and charter high schools in the Miami-Dade school district. Miami-Dade was chosen for this study due to the district having comprehensive school climate data available for the majority of its schools. The study was limited to high schools to control for significant variations between elementary schools, middle schools, and high schools; high school students having superior reading comprehension which lends to more accurate responses; and the focus of the majority of the extant school climate research is on high schools.

Academic years 2001-2002 through 2015-2016 were utilized due to data for these school years being available. Schools that featured insufficient data were not utilized. The majority of charter schools utilized for this study are under the control of an EMO. This study only had three independently-run charter schools due to a lack of their presence in

Miami-Dade. Atypical schools such as juvenile detention centers or those with same-sex education were not utilized as they are significantly dissimilar to traditional schools. Magnet high schools were utilized and their idiosyncrasies accounted for through a binary variable. While their curricula is more specialized than traditional public schools, they were included as they have a large presence in the Miami-Dade school district and add further insight into school district efficacy.

There is substantial variance in the participation rates of the sampled schools. The Miami-Dade Public Schools Research Division does not report aggregated survey data when the number of surveys completed does not meet their minimum reporting requirements. This study utilized their minimum reporting requirements in determining eligibility for each school.

### **Threats to Internal and External Validity**

Due to the ex-post facto design of this study, there are threats to its internal validity. This study's lack of random assignment and quasi-experiment design makes conclusive inferences not possible. This study's use of multiple regression partially alleviates the issue of confounding factors. However, multiple regression cannot control for all confounding factors due to its inherent methodological limitations and lack of data for potentially confounding factors. Any finding of this study that attributes school climate differences to inherent school-type distinctions is not definitive. Some unmeasured characteristics that differ between public school respondents and charter school respondents could still confound the results.

Threats to this study's external validity exist as well. Due to the school climate survey being voluntary, non-response bias exists. The respondents could differ from non-

respondents in significant ways, potentially resulting in the survey data not being representative of student populations. Response rates vary considerably between schools, further compounding the issue. The use of a single school district for this study also limits the generalizability of its results. Since regulations vary between school districts and especially between states, a single school district cannot be representative of all school districts. Miami-Dade's Hispanic-majority student population is unlike that of most school districts, which further limits the generalizability of this study's findings. Caution is also warranted when attempting to generalize the results of this study to independently-run charter schools as the majority of the charter schools in this study are under an EMO.

### **Chapter Summary**

Comparative analyses of school-types have focused exclusively on academic performance without factoring in school climate. Additionally, school climate research has been overwhelmingly conducted on district-run public schools, to the neglect of charter schools. Through comparative analyses of school climate, school-type variances in academic performance can be better understood. Extant literature has inferred a link between school autonomy and school climate.

Research on school climate has shown that school climate is a significant predictor of school performance. Positive school climate fosters increased attendance, connectedness, motivation, staff retention, discipline and safety, collaborative work, student well-being, learning, instruction, staff morale, and job satisfaction. Students and staff display superior performance in school environments that have amicable conditions.

School autonomy can have positive or adverse effects on school climate.

Autonomous schools can experiment and innovate. Principals and teachers can become empowered to tackle issues and find solutions that are optimized for their schools. It can foster greater participation and collaboration. It can also hinder progress. Autonomous schools can choose to not implement favorable practices. They can employ less-qualified individuals and offer less job security to its employees. Their budgets can be allocated poorly. By comparing the school climates of district-run public schools and charter schools, valuable knowledge can be obtained about the influence school autonomy and organizational practices have on school climate.

## **CHAPTER II**

### **LITERATURE REVIEW**

Comparative studies of traditional public schools and charter schools have been oriented towards performance measures. The most recent meta-analysis was conducted by Betts and Tang (2016). They examined studies that employed either the use of lotteries to create a control group or a value-added approach that factored in the students' past achievements. Their meta-analysis found that charter schools did outperform traditional public schools in math, but no significant differences emerged for reading achievements. The results were highly variable, the sample size was small for many of the studies, and the meta-analysis only examined elementary schools.

Betts' and Tang's (2008) meta-analysis did include middle schools and high schools. Charter middle schools outperformed traditional middle schools in math, but charter high schools underperformed in math relative to traditional high schools. The results were also highly variable and featured many studies with low sample sizes. The meta-analyses demonstrate that the effects of charter school education on performance are generally more positive than negative. However, the studies indicate that the effects of school-type on academic achievement is heavily dependent on geography and individual school characteristics (Betts & Hill, 2010).

Studies have also been conducted that examined how charter schools affect the academic performance of non-charter school students. Utilizing school-level data, Bettinger (2005) found little effect of charter schools on public school performance, whereas, Hoxby (2004) and Holmes et al. (2003) found positive effects of charter schools

on public schools. These studies, however, did not use panel data. Methodologies that utilize panel data are able to account for variations within schools and between schools over time, such as changes in student body composition. Additionally, unobserved heterogeneity between schools and within schools can be accounted for with panel methodology. This is normally accomplished through student and school fixed effects, due to school differences commonly being correlated with predictors in the models.

More recent studies have utilized panel data. Utilizing school and student fixed-effects strategies, Sass (2006) and Booker et al. (2008) found that charter schools have positive impacts on traditional public schools, whereas, Bifulco and Ladd (2006a) and Buddin and Zimmer (2005) found statistically insignificant impact estimates. Imberman (2011a), using an instrumental variables strategy that accounted for numerous geographical factors, found that charter schools induce modest but statistically significant drops in academic performance for public elementary schools, but not for public middle schools and public high schools. The extant research has shown that charter schools have mixed effects on public school performance.

Parental involvement in schools has a favorable effect on school climate (Griffith, 1998). Studies have found that traditional public schools and charter schools do vary on parental participation. Bifulco and Ladd (2006b) compared parental participation between traditional public schools and charter schools. Their study found that charter schools' parents participated more frequently in a range of school activities than traditional public schools while controlling other factors. The disparity between the two school-types is attributable to institutional and organizational factors as well as charter schools being established in areas with above-average proportions of involved parents. The study



utilized national survey data, making the results highly generalizable. The results, however, are limited to just 1 year. Parental involvement in schools is included in studies due to its positive influences on schools' cultures and student characteristics. Parental involvement, for instance, is associated with increased student motivation, engagement, and academic achievement (Gonzalez-DeHass et al., 2005).

Disciplinary practices have consequential impacts on school climate. Mitchell and Bradshaw (2013) demonstrated that exclusionary practices were associated with less favorable perceptions of school climate while positive behavioral strategies were positively associated. Disciplinary practices are a significant determinant in parents' choice of school, particularly among Hispanic parents (Weiher & Tedin, 2002). Some charter schools specialize in high behavioral/discipline standards to target this group of parents. For example, from 1997 through 2000, 16% of charter school students were enrolled in such schools in Arizona (Garcia, 2008).

A few studies have demonstrated measurable differences in student behavior and disciplinary practices between the school-types. Imberman (2011a) found that disciplinary infractions decreased as charter schools moved into an area, although attendance did not improve. It is unclear from the study whether the discipline results reflect changes in enforcement or real behavioral improvements. Imberman (2011b) found that students that transferred to start-up charter schools achieved higher attendance rates. Losen et al. (2016) found that while low-suspending charter schools outnumber high-suspending charter schools, charter schools still have a suspension rate 16% higher than non-charter schools. Their study, though, did not control for student and school idiosyncrasies.

Schools' student mobility adversely impact their school climates. Mitchell et al. (2010) found that student mobility rates are negatively associated with school climate. Student mobility rate is the sum of the percent of students that moved into a school and the percent of students that moved out of a school during the school year. Research has shown that children who change schools frequently are more likely to be low-achievers (Fowler-Finn, 2001). Schools with stable student populations tend to have less disorder, higher attendance rates, and superior academic outcomes (Mitchell et al., 2010). The few studies that have compared the student mobility rates of district-run public schools and charter schools demonstrated that charter schools have higher student mobility rates (Bifulco and Ladd, 2005; Hanuschek et al., 2007).

Comparative studies of school climate have been lacking relative to the literature on performance outcomes. Lubienski et al. (2008) did compare school climate by school-type. The study utilized the 2003 Main NAEP mathematics data set. The data set included 190,147 fourth graders and 153,189 eighth graders from representative samples of public and private schools (7,485 schools at grade 4 and 6,092 schools at grade 8). Questionnaire items were utilized to create composite z-scores for the following school climate constructs: teacher morale, conflicts/student behavior, drugs/alcohol, parent involvement, parent volunteerism, student communication with parents about their studies, and student attendance. The majority of the aforementioned constructs were moderate predictors of achievement on the math portion of the NAEP assessment.

The Lubienski et al. (2008) study demonstrates that school climate affects student performance. Charter schools had higher ratings on the majority of school climate constructs than traditional public schools. The study does have limitations. Significance

testing was not conducted on the school climate constructs between traditional public schools and charter schools. Without significance testing, it cannot be ascertained if the school climate differences were simply due to chance. Secondly, the study was limited to just 1 year. The use of multiple years can control for historical events or omitted variables such as school maturation. Charter schools are newer relative to traditional public schools. New schools have unique problems. New schools have relatively low test scores that tend to improve with time (Betts & Hill, 2010). School maturation and other omitted variables could confound the results of the study. Additionally, the study lacks many school climate dimensions such as school connectedness and principal traits. Lastly, the study did not include high schools.

Studies that have examined perceptions of school quality have generally found charter schools to be rated more favorably. Finn et al. (1997) surveyed the parents of children that transferred from traditional public schools to charter schools. The majority of parents felt the charter schools were better with respect to class size, school size, teacher attentiveness, and the quality of instruction and curriculum. Saatcioglu et al. (2011) reaffirmed these findings in their study of charter schools in a Midwestern city school district. They found that parent satisfaction was influenced significantly by whether expectations related to academic, school context, and extracurricular factors were met, regardless of race/ethnicity or socioeconomic status. White parents' satisfaction was most influenced by academic expectations, black parents' satisfaction was most influenced by school context expectations, and Hispanic parents' satisfaction was most influenced by extracurricular expectations.

Buckley and Schneider (2006) found that charter school parents were more satisfied in their cross-sectional analysis. However, in their longitudinal analysis, satisfaction discrepancies between the school-types were negligible after 5 years had passed. Charter school parents' satisfaction with the schools, teachers, principals, values, school size, and class size had declined over time. Only parents' satisfaction with charter school facilities did not decline. Schneider and Buckley (2003) speculated the reasons charter schools enjoy greater satisfaction. The primary reason was that school choice permits parents to select the kind of education they want for their children. Charter schools facilitate school choice by commonly specializing in some niche.

Finn et al. (1997) also found high levels of charter school student satisfaction with numerous school attributes, such as with their teachers, technology, class size, and curriculum. The results of Barrett's (2003) study show that students new to charter schools were at least as satisfied with the charter schools as with their previous schools. The students that were most satisfied rated the overall quality of the charter schools, its teachers, and its classes more favorably than their previous schools. Student and parent lottery winners were more satisfied with their charter schools in Gleason et al.'s (2010) study than the lottery losers were with their traditional public schools. The lottery winners gave their schools higher grades than the lottery losers across several dimensions, including classes, the principal, and various school facilities. The lottery winners also expressed more positive feelings towards their schools.

Charter school teachers view their schools more favorably relative to traditional public teachers (Koppich, Holmes, & Plecki, 1998). Renzulli et al. (2011), utilizing nationwide-data from the Schools and Staffing Survey (SASS) and the Teacher Follow-

up Survey (TFS), found that charter school teachers on average were more satisfied than traditional public school teachers. Greater teacher autonomy in charter schools was the primary reason for this finding. They also found that the negative effects of racial mismatches between teachers and students were ameliorated by greater autonomy. Ni (2012) demonstrated, utilizing SASS data, that charter school and traditional public school teachers had similar perceptions in regards to principal leadership, sense of community and collegiality, classroom autonomy, opportunities for professional development, and adequacy of instructional supplies. Charter school teachers perceived having significantly more influence over school policies, but a heavier workload than traditional school teachers.

Charter schools, however, experience greater teacher attrition rates. Charter school teachers were 130 percent more likely than traditional public school teachers to leave the profession and 76 percent more likely to move to another school (Stuit & Smith, 2012). Teacher characteristics explain a large portion of the turnover gap. Charter school teachers are on average younger, more likely to be working part-time, and less likely to have an education degree or state certification. Most teachers that voluntarily left charter schools cited being dissatisfied with the workplace conditions of the school (Miron & Applegate, 2007). Involuntary attrition is also higher among charter school teachers (Stuit & Smith, 2012). This could be due to charter schools having fewer regulatory barriers in dismissing teachers, charter schools not being unionized, charter school closings as a result of charter revocations, and uncertified teachers being dismissed in order to comply with the Highly Qualified Teacher mandate stipulated by the No Child Left Behind Act.

Variations in workplace conditions and teacher characteristics could have important implications for school climate.

Dissimilarities between traditional public schools and charter schools may arise due to variances in management quality. Bloom et al. (2015) conducted double-blind telephone interviews with principals from over 1,800 high schools across 8 countries, including the United States. They assessed the management quality of schools using 4 areas of management: operations, monitoring, target setting, and people. Their study found that management quality is positively associated with student performance in all the sampled countries and that autonomous schools (such as charter schools) have higher management quality than traditional public schools or private schools. They concluded that “having strong accountability of principals to an external governing body and exercising strong leadership through a coherent long-term strategy for the school appear to be two key features that account for a large fraction of the superior management performance of [autonomous government schools]” (Bloom et al., 2015, p. 672). Management quality is integral to school performance and perhaps school climate.

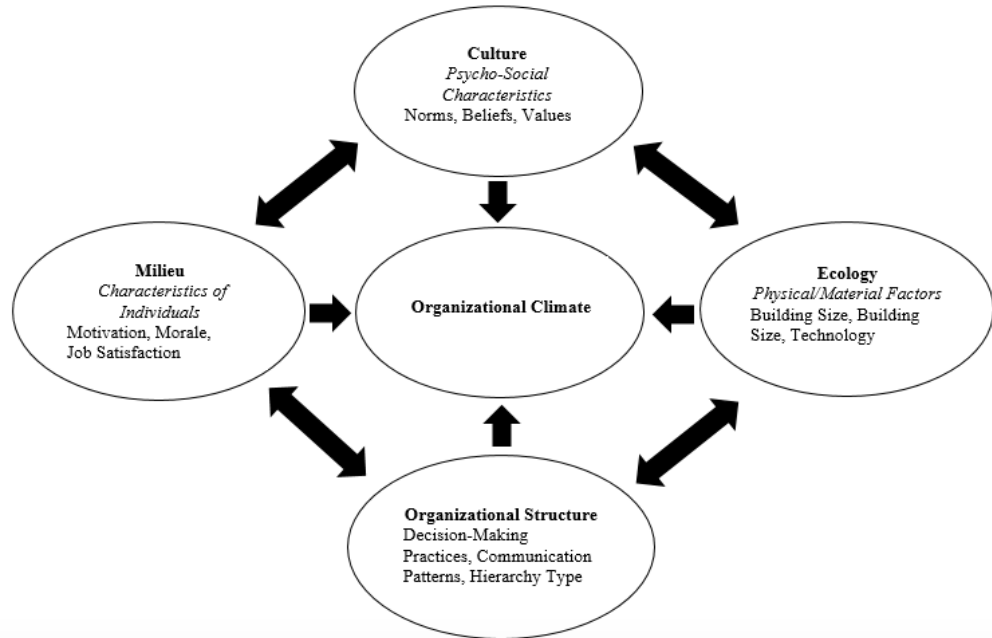
### **Theoretical Orientation**

The climate of schools is influenced by the same factors that influence the climates of other types of organizations. School climate is influenced by the milieu, culture, ecology, and organizational structure of the schools. What separates school climate from organizational climate is its focus on not just its employees’ experiences, but also its students’ experiences. Students spend a considerable amount of time in schools, comparable to the time spent by school staff. In contrast, the amount of time clientele spend in most other organizations is significantly less than the time spent by

organizations' staff. The performance of schools is determined heavily by its students' performances whereas the performance of most other organizations is largely the result of its staff. This distinction has resulted in school climate studies focusing on the experiences of students and staff as they are both integral to how schools perform.

The school climate perspectives of staff and students could be substantially dissimilar. Students and staff experience factors at different frequencies and are exposed to unique factors. Teachers generally interact with principals more than the students. Students generally interact with other students more than teachers. Teachers are generally confined to one classroom. Students generally attend multiple classrooms. Teachers instruct. Students experience instruction. School-level factors influence students' perspectives of school climate more whereas classroom-level factors influence teachers' perspectives of school climate more (Mitchell et al., 2010). The disparate experiences with schools' milieu, culture, ecology, and organizational structure could lead to dissimilar perspectives of school climate between students and staff.

While the experiences of students and staff are dissimilar, it is assumed that the same general organizational constructs will influence both groups' school climate perceptions. Students' and staffs' school climate perceptions will be influenced by milieu, culture, ecology, and organizational structure. It is expected that the relations amongst the organizational constructs present in Figure 1 will be the same for both groups.



**Figure 1. Theoretical Model of Organizational Climate**

School-type could also result in disparate school climate experiences. The dissimilar funding and management structures of district-run public schools and charter schools create differences in school milieu, culture, ecology, and organizational structure. Variances in hiring practices result in dissimilar teacher qualities such as with teaching experience and credentials. Charter school teachers generally have less teaching experience, fewer credentials, and are more likely to be newly-hired. This can result in dissimilar pedagogies, motivation, collaborative work, and other factors pertinent to school climate. Newly-hired teachers, for instance, are more receptive to collaborative work (Ronfeldt et al., 2015).

Differences in school location and demographic targeting result in dissimilar student body characteristics. A larger percentage of traditional public schools are rural



when compared to charter schools. This results in charter schools proportionally having more students that are black, poor, and from urban areas. Student beliefs about education can vary based on their families' socio-economic status. Charter schools have the flexibility to tailor their culture to tackle issues more common with students from high-poverty backgrounds such as with their attentiveness and self-regulation. Sectoral distinctions in ownership can result in different values being venerated. Traditional public schools may place more value on lawfulness, incorruptibility, and impartiality, whereas charter schools may place more value on honesty, profitability, and innovation. The values that charter schools venerate could depend on whether they have a profit or non-profit orientation, although the evidence is weak (Henig et al., 2005). Dissimilarities in demographics and ownership result in cultural differences.

Variances with budgeting, school location, the age of school facilities, and demographics affects school ecology. Traditional public school facilities are generally much older than charter school facilities. Charter schools have the autonomy to allocate their budgets towards school resources and the physical school environment differently from district-run schools. Urban schools have to face challenges related to greater noise levels, traffic congestion, restricted recreational space, building size constraints, environmental pollutants, and diverse student populations. Students from high-poverty families are more likely to engage in delinquency that adversely affects the quality of the school environment and its resources such as vandalism. School-type dissimilarities result in different school ecologies.

Variations in school autonomy result in dissimilar organizational structures. Charter schools' organizational structures have more variance than traditional public

schools. Charter schools can operate under an EMO or operate independently. An EMO can control most of charter schools' operations or grant substantial on-site autonomy, resulting in significant variances in decision-making processes among charter schools. When under an EMO, a charter school belongs to a network of charter schools, resulting in an elaborate hierarchy much like traditional public schools. Charter schools, especially independently-run charter schools, can implement flatter structures. This removes some hierarchal levels and distributes power across multiple positions. Implementing flatter structures can lead to better decision-making, but it can also result in confusion and cumbersome situations when there is significant disagreement. An independently-run charter school generally has less verticality, which makes top-down and bottom-up communication, collaborative work, and implementation of organizational initiatives less challenging. Charter schools also have the flexibility to add or remove personnel positions, resulting in even greater hierarchy variance. School-type influences the organizational structures of schools.

## CHAPTER III

### METHOD

The study utilized district-run public high schools and charter high schools in Miami-Dade County, Florida for empirical analysis. School level is the unit of analysis. The school district is apt for this research for two reasons. First, it is one of the largest districts in the nation. Second, it has conducted the *School Climate Survey* annually, the results of which are available publicly. Few other districts have such high quality and consistent longitudinal data.

The survey items include students' and staffs' perceptions of order and safety, academics, connectedness, institutional factors, and overall school climate. The survey is distributed annually to all schools (public and charter), where students, teachers, and staff respond to the survey voluntarily using a Likert scale response scheme.

For the student surveys, Miami-Dade School District's Research Services randomly selects the homeroom classes from each school that will participate in the paper surveys. The teachers of the selected classes distribute the surveys to the students during a class meeting. The students in the selected classes voluntarily complete the surveys anonymously. The surveys are then shipped to Research Services where the results are tabulated.

The staff surveys are voluntarily conducted online through a school's computer. Full-time personnel in the following categories participate in the survey: classroom teachers (including art, music, P.E., and E.S.E. teachers), guidance counselors, and librarians/AV staff. Research Services sends to each school a roster of staff that are eligible to participate in the survey. Each staff member on the roster picks a random

envelope from a lot. The envelope contains instructions for accessing the survey form on the Internet and a unique ID number. Participants access the online survey at a time and place of her/his choosing during a 5 day period. Research Services warns schools against assembling staff for the purposes of completing the survey. This process ensures anonymity.

The school district aggregates the survey data at the school level. Surveys from academic years 2001-2002 through 2015-2016 were used for structural equation modeling (SEM) and surveys from 2005-2006 through 2015-2016 were used for regression analysis. Florida's *School Public Accountability Reports* and Miami-Dade Public School's *Attendance, Movement, Mobility, and Suspensions Reports* were utilized to collect other variables such as student and teacher demographics, suspension rates, attendance rates, and school performance grades.

SEM, specifically secondary confirmatory factor analysis, was conducted to address the first research question. With SEM, a set of variables can be used to define organizational constructs and to assess how these constructs are related to each other. SEM permits this study to assess the association organizational constructs have with overall perceptions of school climate while simultaneously testing whether the *Annual School Climate Surveys* measure school climate. Secondary confirmatory factor analysis was utilized due to the theoretical models having first-order factors and a higher, second-order factor. Survey items from the *Annual School Climate Survey* were used to create school climate constructs. A mean value was calculated per survey item per school for each time period. The higher the value, the more strongly the sampled individuals agreed with the survey item.

For the student-perceived school climate model, order and safety, ecology, teacher quality, leadership, and connectedness are the first-order factors. For the staff-perceived school climate model, order and safety, ecology, collaboration, leadership, and job satisfaction are the first order factors. Order and safety, teacher quality, connectedness, and job satisfaction are proxy measures of culture and milieu. Leadership and collaboration are proxy measures of organizational structure. There is a theoretical and empirical basis for using these factors as proxy measures. Overall perception of school climate is the second-order factor for both models. Clustered robust standard errors were utilized due to the data being longitudinal.

The safeness of an organization is influenced by its safety culture, which itself is constrained and influenced by organizational culture (O'Toole, 2002). The social order of a school is influenced by the characteristics of the individuals in the school; the school's milieu. Schools with staff and students that espouse school attachment, school commitment, and compliance with school rules tend to have lower levels of misbehavior (Stewart, 2003). Schools with the most disciplinary problems share similar characteristics, such as "inadequate resources for teaching, poor cooperation between teachers and administrators, inactive administrators, teachers' punitive attitudes, and enforcement of inconsistent and unfair rules" (Austin & Duerr, 2011, p. 54).

Students' connectedness to their school are influenced by other students and staff and the values, beliefs, and attitudes they hold; the school's culture. Schools with connectedness tend to have students that "like school, feel that they belong, believe teachers care about them and their learning, believe that education matters, have friends at school, believe that discipline is fair, and have opportunities to participate in

extracurricular activities” (Blum, 2005, p. 17). Schools with connectedness have a culture of trust among students, teachers, staff, administrators, and families. Social isolation, lack of safety, and poor classroom management can imperil connectedness (Bishop et al., 2004).

The attitudes and behavior of teachers is influenced by organizational culture. Somprach et al. (2015) found that the characteristics of teachers such as creativity, enthusiasm, and motivation to improve are influenced by the type of organizational culture present. Teachers are influenced by the impact principals, students, and parents have on school culture (MacNeil et al., 2009). Teachers are shaped by school culture and school culture is shaped by its teachers.

Leadership and organizational structure are strongly associated, with leaders influencing organizational hierarchy, administration, and communication (Ogawa & Bossert, 1995). Leadership is the ability to lead a group of individuals to fulfill organizational goals. Leadership is defined not just by the traits of individuals in managerial roles, but also by the systematic characteristics of an organization. Leaders oversee internal operations, interact with actors external to the organization, and ensure that the goals of an organization are being met. The principal is considered to be the most influential force that shapes student learning besides the classroom teacher (Harvey & Holland, 2011). The leader sets the tone and behavioral norms, substantially influencing organizational culture and climate (Cohen et al., 2009).

Job satisfaction is a series of attitudes the staff harbor which reflect the culture of an organization (Tsai, 2011). When staff share assumptions, values, and beliefs espoused

by an organization, there will be a sense of strong morale and satisfaction. This is especially evident when the mission and goals of an organization are being realized.

Collaboration is a proxy measure for organizational structure as an organization can be structured around collaborative arrangements (McGuire, 2006). Collaboration is likely to occur in schools when principals induce commitment among subordinates and get them invested in the missions and goals of the school. Collaborative efforts require careful planning, open communication, the promotion of information exchange, and the facilitation of trusting relationships. The success of collaborative actions is contingent upon consensus building and joint problem-solving.

Within-between effects panel regressions were conducted to address the second research question. Using panel regression, it can be determined whether school-type (the independent variables, represented with binary variables) has a statistically significant effect on school climate constructs (the dependent variables). By utilizing binary variables, the null hypothesis that the school climate of district-run public schools is the same as that of charter schools can be tested. The school climate dimensions were constructed using principal components factoring. Panel regressions were estimated separately for each school climate construct. The school climate constructs were each individually regressed on the independent and control variables. Each school climate construct is presented within their own section in the results section of this dissertation.

### **Research Variables**

Survey items from the Annual School Climate Survey were used to develop the school climate constructs through factor analysis. They were utilized in structural equation modeling, specifically, second-order confirmatory factor analysis. In the student

model, order and safety, ecology, connectedness, leadership, and teacher quality were the first-order latent factors. In the staff model, order and safety, ecology, collaboration, leadership, and job satisfaction were the second-order latent factors. Overall school climate was the second, higher-order latent factor for both models.

In the panel regression models, the school climate constructs are the dependent variables. The independent variable for each panel regression model is school-type, represented by binary variables that designate schools as being either traditional public schools, magnet schools, or charter schools. Charter schools are the default group, reflected in the constant. The binary variables are also a proxy measure of the inherent characteristics of the three school-types. Control variables are also included. These control variables could have an effect on school climate and are commonly included in education research (Holmes et al., 2003; Hoxby, 2004; Buddin and Zimmer, 2005; Sass 2006; Bifulco and Ladd, 2006a; Bifulco and Ladd, 2006b; Booker et al., 2008; Lubienski et al., 2008; Imberman, 2011a; Imberman, 2011b). Descriptions of the variables are presented in Table 2.



**Table 2. Variable Descriptions**

Variable	Definition
<b>Culture and Milieu</b>	
% Absent 21+ Days	The percentage of students that were absent 21 or more days.
% Black Students	The percentage of students that are black.
% Black Teachers	The percentage of teachers that are black.
% Free/Reduced Lunch	The percentage of students that qualify for free or reduced lunch.
% Graduate	The percentage of teachers that hold a graduate degree.
% In-Field	The percentage of teachers that are certified in the subject they are teaching.
% Minority Students	The percentage of students that belong to a minority group.
% Minority Teachers	The percentage of teachers that belong to a minority group.
% New Instructors	The percentage of school instructors that are newly hired (first year employed at school location).
% NHQT	The percentage of teachers that are classified as being not highly qualified. Generally, teachers are classified as being highly qualified if they hold an acceptable bachelor's or higher degree and hold a valid Florida Temporary or Professional Certificate.
% Parent School Involvement	The percentage of parents that reported having had attended at least 1 school activity.
% Suspensions Out-of-School	The percentage of suspensions that were out-of-school.
Connectedness	A composite index for the connectedness construct. The construct utilizes the following student survey items:  22. Adults at my school care about me as an individual. 23. Adults at my school help me when I need it.
Incidents Rate	The reported number of delinquent incidents per 100 students.
Job Satisfaction	A composite index for the job satisfaction construct. The construct utilizes the following staff survey items:  25. I feel satisfied concerning how my career is progressing at this school. 26. I have a feeling of job security in my present position. 27. I like working at my school. 28. Staff morale is high at my school.
Mobility Index	An index of student movement computed by dividing the number of students who have entered or withdrawn from a location during the regular school year, without regard to how many times an individual student enters or withdraws, by the aggregate number of students in membership at school.
Order and Safety (staff)	A composite index for the order and safety construct (staff version). The staff version of the construct utilizes the following staff survey items:  1. At my school I feel safe and secure. 6. At my school adequate disciplinary measures are used to deal with disruptive behavior. 21. My ability to do the best possible job at this school is limited by school violence. 22. My ability to do the best possible job at this school is limited by student gang activity. 23. My ability to do the best possible job at this school is limited by student substance abuse.

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Order and Safety (student)	<p>A composite index for the order and safety construct (student version). The student version of the construct utilizes the following student survey items:</p> <ol style="list-style-type: none"> <li>1. I feel safe at my school.</li> <li>3. Students in my school usually follow school rules.</li> <li>16. Violence is a problem at my school.</li> <li>17. Gangs are a problem at my school.</li> <li>18. Student drug and alcohol use are a problem at my school.</li> </ol>
Out-of-School Suspension Rate	The number of out-of-school suspensions issued per 100 students.
Performance Grade	An annual numerical rating given to schools based primarily on student performance on the Florida Comprehensive Assessment Test (FCAT) / Florida Standards Assessments (FSA).
Person-Incidents Rate	The reported number of person-related incidents per 100 students.
Property-Incidents Rate	The reported number of property-related incidents per 100 students.
Substance-Use Rate	The reported number of drug or alcohol-related incidents per 100 students.
Suspension Rate	The number of suspensions issued per 100 students.
Teacher Quality	<p>A composite index for the teacher quality construct. The construct utilizes the following student survey items:</p> <ol style="list-style-type: none"> <li>5. My teachers require that I work very hard for the grades I get.</li> <li>9. My teachers are friendly and easy to talk to.</li> <li>10. My teachers make learning fun and interesting.</li> <li>11. My teachers make me want to learn.</li> <li>12. My teachers know a lot about the subjects they teach.</li> <li>13. My teachers give me meaningful homework that helps me learn.</li> <li>14. My teachers are interested in how I do in the future.</li> <li>15. My teachers let me know how I am doing on my school work.</li> </ol>
<b>Ecology</b>	
Ecology (staff)	<p>A composite index for the ecology construct (staff version). The staff version of the construct utilizes the following staff survey items:</p> <ol style="list-style-type: none"> <li>2. At my school the school building is kept clean and in good condition.</li> <li>20. My ability to do the best possible job at this school is limited by insufficient resources (e.g., funds, books, equipment, supplies, etc.).</li> </ol>
Ecology (student)	<p>A composite index for the ecology construct (student version). The student version of the construct utilizes the following student survey items:</p> <ol style="list-style-type: none"> <li>2. My school building is kept clean and in good condition.</li> <li>6. My school has enough books and equipment to help me learn.</li> </ol>
Enrollment Size	The number of students enrolled.
North	A binary variable; 1 = school is located in an area under the purview of the North Regional Office. Constant = school is located in an area under the purview of the Central Regional Office.
South	A binary variable; 1 = school is located in an area under the purview of the South Regional Office. Constant = school is located in an area under the purview of the Central Regional Office.
Teacher-Student Ratio	The number of teachers per 100 students.

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**Organizational Structure**

% New Administrators	The percentage of school administrators that are newly hired (first year employed at school location).
Administrator-Student Ratio	The number of administrators per 100 students.
Collaboration	A composite index for the collaboration construct The construct utilizes the following staff survey items:  3. At my school personnel work together as a team. 5. At my school I feel that my ideas are listened to and considered.
Leadership (staff)	The composite index for the leadership construct (staff version) The staff version of the construct utilizes the following staff survey items:  4. At my school administrators solve problems effectively. 7. My principal is an effective administrator. 8. My principal represents the school in a positive manner. 9. My principal demonstrates good interpersonal skills. 10. My principal deals with conflict constructively. 11. My principal responds in a reasonable time to my concerns. 12. My principal treats me with respect. 13. My principal is receptive to constructive criticism. 14. My principal is supportive of teachers. 18. My ability to do the best possible job at this school is limited by lack of concern/support from the principal.
Leadership (student)	The composite index for the leadership construct (student version) The student version of the construct utilizes the following student survey items:  19. My principal does a good job running the school. 20. The assistant principals are available when needed.
Magnet School	A binary variable; 1 = magnet school. Constant = charter school.
Traditional Public School	A binary variable; 1 = traditional public school. Constant = charter school.

**Overall School Climate**

Overall School Climate (staff) (Z-Score)	The composite index for the overall school climate construct (staff version) The staff version of the construct utilizes the following staff survey items:  33. I believe children attending my school are receiving a good education. 34. The overall climate or atmosphere at my school is positive and helps students learn.
Overall School Climate (student) (Z-Score)	The composite index for the overall school climate construct (student version) The student version of the construct utilizes the following student survey items:  24. I like coming to my school. 25. I am getting a good education at my school 26. The overall climate or feeling at my school is positive and helps me learn.

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The control variables that were included in the panel regression models were selected due to theoretical relevance and preliminary statistical analyses. The included control variables are variables that are assumed to be influenced more by factors external to schools than by internal school factors. The control variables that were utilized were % absent 21+ days, % black students, % black teachers, % parent school involvement, enrollment size, mobility index, out-of-school suspension rate, performance grade, north, and south. The inclusion of these control variables along with the school-type binary variables allows for school-type specific effects to be measured independently of factors external to school-type operations.

The variables % absent 21+ days and out-of-school suspension rate are measures of inherent student behavior. They could also represent the effectiveness of schools' discipline policies, which schools do have control over. However, the moderate correlation found between % absent 21+ days and out-of-school suspension rate ( $r = .58$ ) is not strong enough to suggest that they measure discipline policy effectiveness more so than inherent student characteristics. If the variables did measure discipline policy effectiveness, the correlation between the variables would have been higher. The variables were obtained from Miami-Dade Public Schools' Attendance, Movement, Mobility, and Suspensions report.

The racial makeup of schools cannot be readily controlled by schools due to non-discrimination and equal opportunity laws. While schools can manipulate their racial makeup through their location, target audience, and, in the case of magnet schools, racial quotas, schools cannot prevent students and teachers from attending solely based on race. It is assumed in this study that schools' organizational practices do not have as large of an

influence on their racial makeup as external factors. The variables % black students and % black teachers were included due to extant studies having observed racial differences in culture, experiences, and socio-economic status. The % black students variable was obtained from Florida Department of Education's School Public Accountability Reports while % black teachers was derived from Miami-Dade Public Schools' Annual School Climate Surveys.

Parental school involvement is affected by schools' organizational practices. However, there is an assumption that parental school involvement is more influenced by parent characteristics such as educational background and socio-economic status. The variable % parent school involvement was included not just due to parents' significant influence over school climate, but it is also a proxy measure of some innate student characteristics such as student motivation. The % parent school involvement was derived from Miami-Dade Public Schools' Annual School Climate Surveys.

Enrollment size is affected by building capacity. Initially, schools' decisions related to building size affect schools' enrollment size. Schools cannot readily adjust their enrollment size, however. Building size cannot be readily changed nor can schools freely relocate to different facilities. Enrollment size was included due to extant studies having demonstrated a negative association between enrollment size and school climate (Cotton, 1996; Bowen et al., 2000; Cotton, 2001; Grauer, 2017). This variable was obtained from Florida Department of Education's School Public Accountability Reports.

The mobility index measures the stability of schools' student populations. When student transience is high, school performance tends to decline and student-peer and student-staff relationships become disrupted. It is assumed that school transience is

affected more by the students' familial circumstances than by the schools' organizational practices. This variable was obtained from Miami-Dade Public Schools' Attendance, Movement, Mobility, and Suspensions report.

Student performance and school climate have a reciprocal relationship. While student performance is significantly influenced by schools' organizational practices, it is more influenced by innate student characteristics. The variable performance grade was included because it is a proxy measure of student characteristics such as academic motivation. Schools' performance grades are based on student performance on the English Language Arts, Mathematics, Science, and Social Studies sections of the FCAT/FSA; learning gains on the English Language Arts and Mathematics sections of the FCAT/FCA; the learning gains for the lowest performing 25% of students on the aforementioned two sections; graduation rate; and the percentage of high school graduates who earned a score on an acceleration examination or a grade in a dual enrollment course that qualified them for college credit or an industry certification.

The location of a school cannot be readily changed. The surrounding neighborhoods can influence students' perceptions of school safety, environment, and climate. Miami-Dade schools are grouped by location and the regional office they fall under (North, Central, and South). The grouped locations could vary on neighborhood characteristics that impact school characteristics. The regional offices could also cause variations in school characteristics such as with hiring practices and supervision.

### **Background of Research Setting: Florida**

The sample of schools that was utilized in this study are located in the Miami-Dade school district, the largest school district in the state of Florida. As of 2017, Florida

has the third largest number of students enrolled in charter schools and the third largest number of charter schools in the United States. Approximately 9 percent of public school students in Florida are enrolled in a charter school, markedly above the national average of 5 percent.

Florida passed charter school legislation in 1996, and the first charter school in the state opened that year. As of 2017, an estimated 656 charter schools are now operational out of the 4,319 schools in the state. An estimated 291,200 students in the state are enrolled in charter schools out of 2,756,944 students. The state had a voucher system for low-income families from 1999 until 2006 that facilitated school choice. Florida does not put a cap on charter school growth. In 2014, Florida had the second largest number of students enrolled in EMO-affiliated charter schools in the nation (at 123,697), surpassing the combined memberships of CMO-affiliated charter schools (at 16,388) and independently-run charter schools (at 106,182) in the state.

Florida requires performance-based charter contracts. These contracts are separate documents from their application and are executed by the governing board of the charter school and the authorizer. The charter must address current incoming baseline standards of student academic achievement and the method of measurement to be used. Initial charter terms are for four or five years, with several exceptions. Charter schools operated by a municipality or other public entity, charter lab schools, high-performing charter schools, and charter schools run by an entity designated as non-profit are eligible for up to 15 year terms.

Charter schools are required to participate in the state's academic accountability system and charter school governing boards must annually report to their authorizers

regarding their schools' progress. The authorizers then pass along these performance reports to the state commissioner of education and these reports are made publicly available. Authorizers have the responsibility of monitoring and reviewing a school's financial health and progress towards the goals dictated in the charter. Charter schools must also undergo internal audit procedures and controls which includes an annual financial audit. Charter schools must submit monthly financial statements to authorizers. If a school receives a grade of a D or F, an improvement plan must be submitted to the authorizer.

The National Alliance of Public Charter Schools (2017) ranks Florida 8th out of 44 states in how it aligns to the organization's model law for supporting the growth of high quality charter public schools. The model law is a template for states which encourages equity and accountability. According to the organization, Florida "provides a fair amount of autonomy and accountability, and provides a robust appellate process for charter school applicants. However, it still provides inequitable funding to charter schools" (Ziebarth, Palmer, & Schultz, 2017, p. 28). It goes on to state that "potential areas for improvement include creating authorizer accountability requirements, ensuring equitable operational funding and equitable access to capital funding and facilities, and strengthening accountability for full-time virtual charter schools" (Ziebarth, Palmer, & Schultz, 2017, p. 28).

### **Background of Research Setting: Miami-Dade School District**

The Miami-Dade school district has the largest number of students enrolled in the state of Florida and the fourth largest in the country. In the 2016-2017 school year, 356,086 students were enrolled in the district. It is also the second largest minority-



majority school district in the country, with 62% of students enrolled being of Hispanic origin. In the 2016-2017 school year, 108,684 students were enrolled in high schools.

During the 1990's, the district experienced rapid population growth. In 1991-1992, there were 304,287 students enrolled in the district's 278 schools. By 2000-2001, student enrollment had increased to 368,453 students and the number of schools had grown to 325. Student enrollment has slightly decreased since then, but the number of schools had increased to 467 largely due to the growth of charter schools.

The first charter school opened in the 1999-2000 school year and the first charter high school opened in the 2001-2002 school year. The 2010s witnessed a significant increase in the number of alternative schools like charter schools and magnet schools. There are currently 127 charter schools operating and 113 schools with a magnet program. In 2016-2017 school year, 62,929 students were enrolled in charter schools; 17,313 of them were enrolled in charter high schools. All of the charter schools' authorizers are local education agencies.

Miami-Dade's proportion of charter high schools that are under EMOs is high. Of the 31 charter high schools in 2015-2016, 3 were independently-run, 1 was run by the school board of Miami-Dade, and 27 were under some EMO. Nine different EMOs operated charter high schools in the district. Academia was the largest EMO, having operated 15 charter high schools.

### **Chapter Summary**

District-run public high schools and charter high schools from Miami-Dade County were used for this study. Miami-Dade is the fourth largest school district in the nation, with 392 schools, 345,000 students, and over 40,000 employees. Data from 2001-

2002 through 2015-2016 academic years were utilized. The student and staff versions of the Annual School Climate Survey were used to develop school climate dimensions. From the student version, order and safety, ecology, connectedness, leadership, teacher quality, and overall school climate constructs were devised. From the staff version, order and safety, ecology, leadership, collaboration, job satisfaction, and overall school climate constructs were devised.

Structural equation modeling (SEM) was utilized to address the first research question. Separate models for students' and staffs' perceptions of school climate were developed. The strength of each organizational constructs' association with overall school climate was measured through SEM. Panel regression was utilized to address the second research question. Panel regression permits comparisons of district-run public schools and charter schools on school climate dimensions over time while controlling other factors. Separate regressions were estimated for each school climate construct.

## **CHAPTER IV**

### **RESULTS**

The results section is subdivided into separate sections. The sections appear in the following order: sample descriptives, structural equation model for students' perceptions of school climate, structural equation model for staffs' perceptions of school climate, comparative results for students' perceptions of school climate, and comparative results for staffs' perceptions of school climate. Each school climate construct has their own section devoted to their regression results within the comparative results sections.

#### **Sample Descriptives**

The sample consists of district-run traditional high schools, magnet high schools, and charter high schools from the Miami-Dade school district. Data from 2001-2002 through 2015-2016 academic years were utilized for structural equation modeling whereas data from 2005-2006 through 2015-2016 were utilized for regression analyses. A total of 471 traditional high school cases, 192 magnet high school cases, and 236 charter high school cases were used for structural equation modeling and/or regression analyses.

The majority of students in Miami-Dade are minorities. The 3 sampled school-types have similar minority rates. The largest minority group in Miami-Dade is Hispanic, with 69.2% of all students belonging to this ethnic group in 2015-2016. This is well above the approximate national average of 25% and the Florida average of 29%. The percentage of students who are black in Miami-Dade was 21% in 2015-2016, above the approximate national average of 15% and similar to Florida's average of 23%. The sampled charter high schools have a substantially lower percentage of black students than district-run public high schools. This is in contrast to national averages, where the

percentage of black students is higher in charter schools (28%) than in traditional public schools (14%). In the state of Florida, charter schools and public schools have similar average rates of black students (22% and 23% respectively).

The sampled district-run public high schools have, on average, substantially more students enrolled and less student transience than charter schools. Traditional public high schools have the highest rate of students belonging to low-socioeconomic families out of the three sampled school-types. Traditional public schools appear to have more behavioral issues based on the suspension rates and reported incident rates. Charters schools, though, have greater absenteeism.

Teachers in public high schools appear to be more experienced and qualified based on variables such as the percentage of teachers holding a graduate degree and the percentage of teachers who are newly-hired. Charter schools have proportionally more minority teachers, but proportionally less black teachers. This is in contrast to national averages, where charter schools have a higher percentage of black teachers than traditional public schools (9.4% and 6.5%, respectively). The district-run public schools have more teachers per pupil. Charter schools have a higher percentage of newly-hired administrators and a higher administrator-student ratio. Traditional public schools have the fewest percentage of parents involved in school activities out of the three school-types. Table 3 has the sample descriptives. Note that Table 3 is only for academic years 2005-2006 through 2015-2016.

**Table 3. Sample Descriptives**

Variable	<u>Traditional School</u>		<u>Magnet School</u>		<u>Charter School</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Culture and Milieu</b>						
% Absent 21+ Days	11.533	7.566	5.058	6.106	17.336	22.221
% Black Students	26.728	28.375	31.122	29.047	14.759	23.73
% Black Teachers	18.292	16.152	20.899	16.852	11.823	17.547
% Free/Reduced Lunch	64.461	18.711	56.808	20.446	59.357	24.972
% Graduate	47.526	13.411	48.333	13.008	25.230	20.537
% In-Field	95.667	3.573	96.409	3.539	89.054	16.841
% Minority Students	91.220	9.025	87.519	9.836	92.055	8.040
% Minority Teachers	67.724	15.228	66.882	16.702	75.280	21.270
% New Instructors	15.220	15.315	20.519	22.266	37.471	34.707
% NHQT	7.997	5.334	7.489	6.113	23.043	18.870
% Parent School Involvement	64.202	10.265	73.713	12.427	70.837	19.319
% Suspensions Out-of-School	31.236	24.379	56.459	41.455	59.470	41.606
Connectedness (Z-Score)	-.348	.777	.354	.998	.274	.760
Incidents Rate	4.343	2.997	1.777	2.212	.783	1.172
Job Satisfaction (Z-Score)	-.272	.857	.261	.989	.504	1.067
Mobility Index	24.501	10.996	13.762	13.489	33.755	29.097
Order and Safety (staff) (Z-Score)	-.385	.855	.504	.852	.914	.631
Order and Safety (student) (Z-Score)	-.550	.805	.596	.963	.639	.561
Out-of-School Suspension Rate	13.231	11.964	5.479	8.852	6.307	9.056
Performance Grade	58.661	9.934	71.283	14.141	67.319	12.506
Person-Incidents Rate	2.330	2.175	.989	1.752	.589	1.061
Property-Incidents Rate	1.025	.769	.505	.521	.006	.049
Substance-Use Rate	.862	.587	.243	.309	.186	.371
Suspension-Rate	44.679	34.675	11.944	18.861	10.287	12.955
Teacher Quality (Z-Score)	-.269	.810	.200	1.012	.189	.996

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<b>Ecology</b>						
Ecology (staff) (Z-Score)	-.261	.883	.230	1.019	.749	.931
Ecology (student) (Z-Score)	-.328	.873	.358	.946	.122	.732
Enrollment Size	2291.885	1003.462	1405.59	1157.557	421.090	445.208
Teacher-Student Ratio	5.414	1.241	5.960	1.867	4.141	2.648
<b>Organizational Structure</b>						
% New Administrators	19.030	23.884	20.640	28.667	24.471	39.492
Administrator-Student Ratio	.305	.365	.418	.616	1.016	1.486
Collaboration (Z-Score)	-.254	.806	.143	.996	.744	1.033
Leadership (staff) (Z-Score)	-.196	.890	.060	1.016	.659	.904
Leadership (student) (Z-Score)	-.245	.856	.325	.920	.158	1.014
<b>Overall School Climate</b>						
Overall School Climate (staff) (Z-Score)	-.279	.835	.502	1.019	.550	.859
Overall School Climate (student) (Z-Score)	-.356	.806	.512	1.019	.112	.787

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### **Structural Equation Model for Students' Perceptions of School Climate**

Structural equation modeling (SEM) with robust clustered standard errors was performed using STATA 14.2 software (StataCorp LP., College Station, TX.). Robust clustered standard errors were necessary due to the data being longitudinal. It adjusts estimates for correlations within groups of observations. SEM was utilized to develop a second-order confirmatory factor analysis model for students' perceptions of school climate. To determine whether the *Annual School Climate Survey* captures specified school climate domains, Cronbach's Alpha was computed (or Spearman's Correlation for two-item scales) to confirm internal consistency. The model utilized 883 observations, of which 464 were traditional schools, 190 were magnet schools, and 229 were charter schools. The model utilized data from 2001-2002 through 2015-2016 academic years.

Due to organizational climate domains being very broad in scope, a single instrument cannot pragmatically capture all the attributes of these domains. Subsets of these domains that are present in the survey data were used to represent the organizational domains to a certain degree. Many of these subsets come from the school climate literature. The 5 factors that were analyzed were order and safety, ecology, connectedness, teacher quality, and leadership.

Order and safety, connectedness, and teacher quality are proxy measures for the culture and milieu constructs. The safeness of an organization is influenced by its safety culture, which itself is constrained and influenced by organizational culture (O'Toole, 2002). The social order of a school is influenced by the characteristics of the individuals in the school; the school's milieu (Stewart, 2003). Students' connectedness to their school are influenced by other students and the values, beliefs, and attitudes they hold; the

school's culture (Blum, 2005). Organizational culture and school milieu significantly influence teachers' qualities within a school (MacNeil et al., 2009; Somprach et al., 2015). Leadership is a proxy measure for organizational structure. Leadership and organizational structure are strongly associated, with leaders influencing organizational hierarchy, administration, and communication (Ogawa & Bossert, 1995).

All 5 school climate factors (order and safety, ecology, connectedness, teacher quality, and leadership) have a statistically significant relationship ( $p < .05$ ) with the latent factor school climate. The standardized coefficients in the structural equations indicate that all 5 factors have a strong relationship with school climate. Ecology had the strongest relationship ( $\beta = .95$ ), followed by connectedness ( $\beta = .89$ ), safety and order ( $\beta = .85$ ), teacher quality ( $\beta = .84$ ), and leadership ( $\beta = .82$ ). All factor loadings are  $> .70$ , which is desirable for the latent variables.

Due to the use of robust clustered standard errors, a standardized root mean square residual (SRMR) fit index was utilized to assess goodness of fit for the model. It measures the difference between the observed correlation and the predicted correlation to produce the mean absolute values of the covariance residuals. A value  $< .08$  generally indicates a good fit. The model has an SRMR value of .068 and a  $R^2$  value of .987, indicating that the model fits the data well. Figure 2 has the structural equation model for student-perceived school climate.



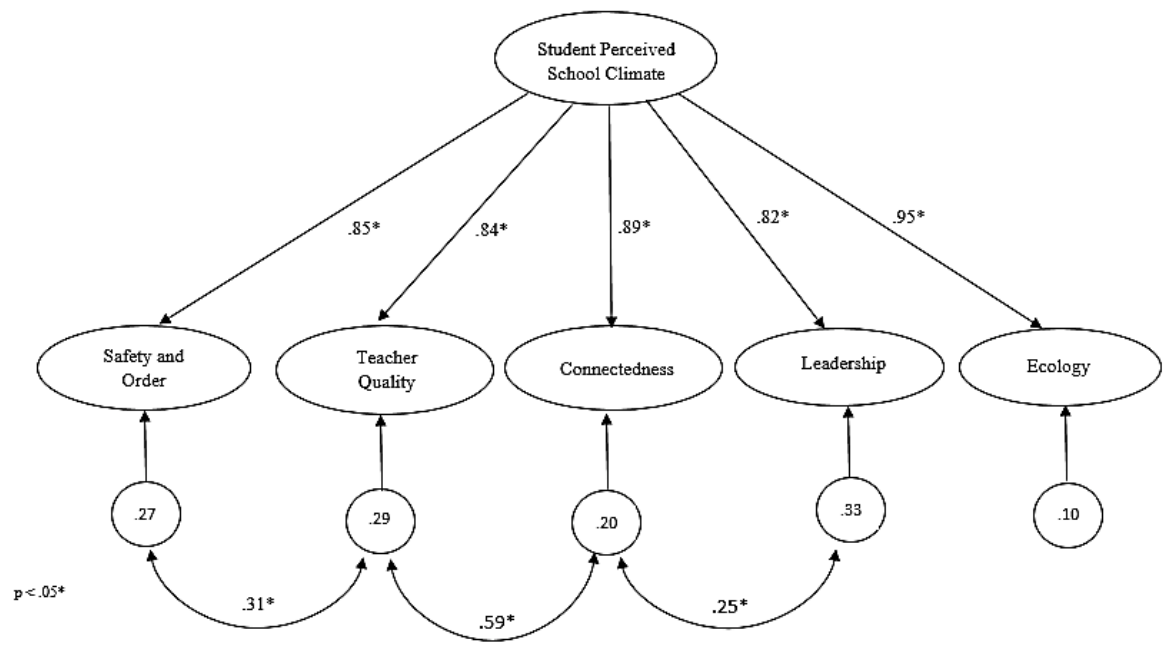


Figure 2. Structural Equation Model of Student-Perceived School Climate

### **Structural Equation Model for Staffs' Perceptions of School Climate**

As with the SEM for students' perceptions of school climate, the SEM for staffs' perceptions of school climate was also performed using STATA 14.2 software (StataCorp LP., College Station, TX.). Robust clustered standard errors were utilized due to the data being longitudinal as it adjusts estimates for correlations within groups of observations. SEM was utilized to develop a second-order confirmatory factor analysis model for staff perceptions of school climate. To determine whether the *Annual School Climate Survey* measures school climate domains, Cronbach's Alpha was computed (or Spearman's Correlation for two-item scales) to confirm internal consistency. The model utilized 771 observations, of which 444 were traditional schools, 183 were magnet schools, and 144 were charter schools. The model utilized data from 2001-2002 through 2015-2016 academic years.

Due to organizational climate domains being very broad in scope, a single instrument cannot pragmatically capture all the attributes of these domains. Subsets of these domains that are present in the survey data were used to represent the organizational domains to a certain degree. Some of these subsets come from the school climate literature. The 5 school climate factors that were analyzed were order and safety, ecology, collaboration, job satisfaction, and leadership.

As with the student SEM model, order and safety is a proxy measure for culture and milieu and leadership is a proxy measure for organizational structure. Job Satisfaction is a proxy measure for the culture of a school. Job satisfaction is a series of attitudes the staff harbor which reflect the culture of an organization (Tsai, 2011).

Collaboration is a proxy measure for organizational structure as an organization can be structured around collaborative arrangements (McGuire, 2006).

All 5 school climate factors (order and safety, ecology, collaboration, job satisfaction, and leadership) have a statistically significant relationship ( $p < .05$ ) with the latent factor school climate. The standardized coefficients in the structural equations indicate that all 5 factors have a strong relationship with school climate. Job satisfaction had the strongest relationship ( $\beta = .96$ ), followed by collaboration ( $\beta = .89$ ), ecology ( $\beta = .89$ ), safety and order ( $\beta = .82$ ), and leadership ( $\beta = .77$ ). All factor loadings are  $> .70$ , which is desirable for the latent variables. It is worth noting that the leadership construct has many statistically significant associations. It has a statistically significant relationship with all but the ecology construct.

Due to the use of robust clustered standard errors, a standardized root mean square residual (SRMR) fit index was utilized to assess goodness of fit for the model. It measures the difference between the observed correlation and the predicted correlation to produce the mean absolute values of the covariance residuals. A value  $< .08$  generally indicates a good fit. The model has an SRMR value of .074 and a R2 value of .985, indicating that the model fits the data well. Figure 3 has the structural equation model for staff-perceived school climate.

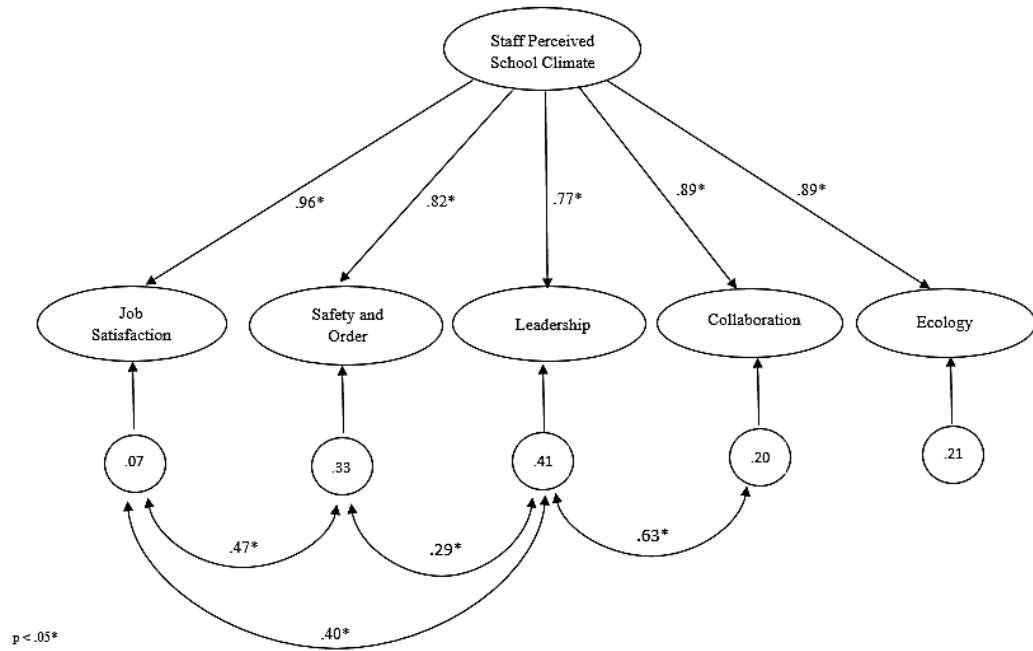


Figure 3. Structural Equation Model of Staff-Perceived School Climate

## **Comparative Results for Students' Perceptions of School Climate**

To compare the variations in school climate factors between public and charter schools, panel regression models were estimated per school climate construct. Panel regression models with both between and within effects were utilized to assess the effect of school-type on school climate constructs while controlling other factors. Within-between panel regression permits the analysis of variables with fixed effects while simultaneously incorporating time-invariant variables such as school-type. Of the 597 cases, 323 were traditional schools, 137 were magnet schools, and 137 were charter schools. The regressions span from 2005-2006 through 2015-2016 academic years.

Fixed effects were necessary to implement due to the well-established assumption that the predictors in the models are correlated with differences between school clusters. Additionally, the Hausman test (Hausman & Taylor, 1981) indicated that a model with fixed effects will produce estimates that are more consistent than a model with just random effects. An alpha score of .05 was utilized as the statistical significance level for the Hausman test. The within-between effects approach works by decomposing time-varying predictors into between and within effects components and incorporating them along with time-invariant predictors into a single random effects panel regression model. The between effect is the group mean of a cluster and the within effect is a demeaned value computed by subtracting observation values from the group mean. Demeaning corrects for between-cluster differences for predictors that vary between and within clusters.

The comparative results are subdivided into the following sections: students' perceptions of order and safety, students' perceptions of ecology, students' perceptions of

leadership, student perceptions' of connectedness, students' perceptions of teacher quality, and students' overall perceptions of school climate.

### **Students' Perceptions of Order and Safety**

Order and safety is the degree of physical and emotional security present in a school. There are multiple factors that influence the order and safety of schools. Orderly schools have effective, consistent, and fair disciplinary practices (Kitsantas et al., 2004). The presence of gangs and drug use can negatively affect students' perceptions of school safety (Schreck & Miller, 2003). Security, surveillance, and other preventative measures can have variable effects on perceptions of safety (Kitsantas et al., 2004; Schreck & Miller, 2003). Smaller schools are generally safer and more orderly (Bowen et al., 2000). School location influences perceptions of school safety (Bosworth et al., 2009). Surrounding areas with high poverty and crime adversely affect perceptions of safety (Laub & Lauritsen, 1998). High-performing schools tend to be safer and generally have well-disciplined students (Gronna & Chin-Chance, 1999; Bowen, 1999; Milam et al., 2010).

Survey items 1, 3, and 16-18 from the student survey were utilized for the order and safety dimension. Charter school and magnet school students rated their schools more favorably on the order and safety survey items than traditional public school students. Compared to traditional public school students, charter school and magnet school students felt safer in their own schools and perceived delinquency, violence, gangs, and drug and alcohol use to be less problematic. Table 4 features descriptives of the order and safety survey items.

It is worth noting the strong correlation between the order and safety construct and the reported incidents rate ( $r = -.79$ ). The strong correlation suggests that students' perceptions are reliable measures of the orderliness and safeness of schools.

**Table 4. Descriptives of Order and Safety Student Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. I feel safe at my school.	3.68	.41	4.06	.50	4.06	.30
3. Students in my school usually follow school rules.	2.67	.49	3.38	.61	3.20	.40
16. Violence is a problem at my school.	2.78	.59	1.93	.68	1.88	.36
17. Gangs are a problem at my school.	2.42	.54	1.73	.63	1.63	.34
18. Student drug and alcohol use are a problem at my school.	2.87	.39	2.32	.47	2.15	.45
Order and Safety Factor (Z-Score)	-0.55	.81	0.60	.96	0.64	.56

For the panel regression, survey items 16–18 were inverted so that all the survey items have the same polarity. A positive coefficient indicates a favorable effect on students' perceptions of order and safety. The panel regression model demonstrates that school-type does have a statistically significant effect on students' perceptions of order and safety. Magnet schools have, on average, higher order and safety ratings than traditional public schools and charter schools when other variables are controlled. There is no statistically significant difference between traditional public schools and charter schools. Table 5 features the panel regression results for the safety and order dimension.

Magnet schools could have more structured learning environments and effective policies against delinquency. They are known for their responsiveness and creating a sense of community conducive to discipline and safety. It is also likely that magnet

school student bodies have favorable characteristics not accounted for by the model.

School entrance exams commonly employed by magnet schools act as barriers against ill-behaved students. The variables in the model may not capture some student behaviors such as bullying and peer pressure.

**Table 5. Within-Between Effects Panel Regression for Order and Safety (Student)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.031***	.006	-.010	.006
% Black Students	-.010***	.002	-.001	.008
% Black Teachers	-.000	.004	-.000	.002
Performance Grade	.022***	.005	.006*	.002
% Absent 21+ Days	-.004	.012	-.002	.004
Out-of-School Suspension Rate	-.029***	.006	-.012***	.003
Mobility Index	-.003	.007	-.011**	.004
% Parent School Involvement	-.007	.006	.002	.002
North	.061	.099		
South	.032	.094		
Traditional School	-.050	.155		
Magnet School	.319**	.112		
Constant	.176	.628		
<hr/>				
Number of Observations	597			
Number of Groups	83			
Adjusted R2	.81			
Wald Chi2 (20)	1323.64***			
Rho	.39			
<hr/>				
p < .05*   p < .01**   p < .001***		<sup>A</sup> unit in hundreds		



Enrollment size, black student percentage, out-of-school suspensions, and student mobility have a negative association with order and safety. School performance has a positive association with order and safety. Enrollment size and black student percentage predict between-cluster variation in order and safety. Student mobility predicts within-cluster variation. School performance and out-of-school suspensions predict both between- and within-cluster variation.

In addition to having a negative effect on order and safety, out-of-school suspension rate is strongly correlated with reported incidence rates ( $r = .79$ ). It is unclear if this suggests that suspension rate is a proxy measure of student behavior or a proxy for discipline policy effectiveness. The moderate correlation between absenteeism and out-of-school suspensions ( $r = .58$ ) seems to indicate that suspension rate is more of a proxy measure of behavior. If suspension rate were a proxy for discipline policy effectiveness, then it would be highly correlated with the absence rate.

Traditional public schools had significantly higher out-of-school suspension rates than charter schools throughout the study period, with the exception of the 2015-2016 academic year. This is in contrast to the prevailing notion that charter schools suspend students at higher frequencies. Charter schools' lower suspension rates could be the result of its organizational practices. However, this cannot be conclusively ascertained from the analysis as it is possible that the charter school student populations are better-behaved regardless of the schools' practices, making the employment of disciplinary actions less necessary.

In the 2015-2016 school year, the school district implemented a policy that discouraged the use of suspensions and out-of-school suspensions. The district schools'

suspension and out-of-school suspension rates dropped as a result. The school district during the study period started to replace out-of-school suspensions with alternative programs such as the district's "Success Centers". Charter schools are not subject to these changes. The gap in suspension rates between district-run public schools and charter schools almost vanished the year this policy was implemented. District-run public schools also had lower out-of-school suspension rates than charter schools that year. The delinquency rates of the public schools also decreased substantially that year, although they were still higher than that of charter schools.

Reductions in out-of-school suspensions could result in lower delinquency rates. Exclusionary practices such as suspensions have been shown to be a risk factor for future delinquent behavior (Hemphill et al. 2009). There have been allegations, though, that district-run schools are underreporting suspension rates (Gerety, 2017). If the allegations are true and the practice is widespread, this would distort the data, giving district-run schools the appearance of suspension rates that are actually lower than reality.

Cultural gaps between black students and their schools can makes establishing healthy relationships more difficult (Wimberly, 2002), adversely affecting order and safety. Black students are more likely to attend improvised schools, be underprivileged, perform worse in school, have behavioral problems, and experience punitive actions. The discrepancy in the percentage of black students between district-run public schools and charter schools could partially explain the dissimilar order and safety ratings. Charter schools proportionally have less black students.

The negative association between the mobility index and the order and safety measure was expected as parents are more likely to transfer their children out of schools

that are perceived to be unsafe and disorderly. Charter schools do have higher student transience. The negative association between enrollment size and order and safety was also expected as smaller schools tend to have less violence and a greater sense of social safety. Traditional public schools are larger on average.

The positive association between school performance and order and safety is unsurprising. Delinquent students are not as engaged in learning and are less academically inclined. High performing schools tend to have environments that stimulate strong bonds and reinforce civility. Disorderly and unsafe environments hinder student learning. Students must be free from the distractions that such environments create to achieve academic success.

### **Students' Perceptions of Ecology**

Ecology refers to the physical and material factors in a school. Many aspects of the school's physical environment could influence school climate. The quality of the school buildings impacts school climate and academic performance. The extant research has demonstrated a link between school building quality and student achievement (Earthman, 2004; Earthman and Lemasters, 1996, 1998; Higgins et al., 2005; Lemasters, 1997; Schneider, 2002). Uline and Tschannen-Moran (2008) found that school climate mediates the relationship between the quality of school facilities and student achievement. Cleanliness, the condition of school buildings, and ongoing maintenance influence students' perceptions of their schools (Lackeny, 1996; Lowe, 1990). The quantity and quality of available learning resources also impacts perceptions of school climate (Vieno et al., 2005).

The school climate survey only has two survey items pertaining to ecology. Survey items 2 and 6 from the student version of the survey were utilized to measure this dimension. Students were asked to rate the cleanliness and condition of the school facilities and the availability of learning resources. Charter school and magnet school students rated the cleanliness and the condition of their school buildings more favorably than traditional public school students. Magnet school students gave higher ratings for the adequacy of learning equipment than charter school and traditional public school students. Table 6 features descriptives of the survey items utilized for the ecology dimension.

**Table 6. Descriptives of Ecology Student Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. My school building is kept clean and in good condition.	3.03	.60	3.58	.61	3.61	.37
6. My school has enough books and equipment to help me learn.	3.38	.40	3.58	.47	3.35	.47
Ecology Factor (Z-Score)	-0.33	.87	0.36	.95	0.12	.73

In the panel regression model, school-type is a statistically significant predictor of students' perceptions of ecology. Traditional schools and magnet schools have a higher ecology rating than charter schools when other factors are controlled. This could be due to some charter schools utilizing facilities that were not originally built as schools and perhaps charter schools allocating less of their budget towards maintenance and educational supplies. Table 7 has the panel regression model for the ecology dimension.

Black student percentage, enrollment size, student mobility, and out-of-school suspensions have a negative association with ecology. Enrollment size and black student percentage predict between-cluster variation in ecology. Out-of-school suspensions and student mobility predict within-cluster variation. Black students are more likely to attend impoverished schools that have a scarcity of educational supplies and feature substandard physical environments (Young et al., 2003; Lee, 2004; Lee & Wong, 2004; Reardon, 2016). Larger schools tend to be located in more urban settings, which experience traffic congestion, environmental pollutants, limited space, and other attributes inimical to school ecology. Schools with subpar facilities or inadequate resources are more likely to experience students being transferred-out by their parents to schools with superior environmental conditions and educational supplies. Suspension rate acts as a proxy measure for delinquency and vandalism; vandalism adversely affects physical environments and learning equipment quality.

School performance has a positive association with ecology. It predicts between-cluster variation in ecology. High performing schools could have student bodies that are more respectful of their surroundings and school supplies. Students also perform better when they learn in amicable environments and have adequate educational materials. Clean, quiet, and comfortable environments are conducive to learning.

**Table 7. Within-Between Effects Panel Regression for Ecology (Student)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.029***	.008	-.016	.010
% Black Students	-.015***	.003	-.010	.017
% Black Teachers	-.003	.007	-.001	.003
Performance Grade	.023**	.008	.001	.004
% Absent 21+ Days	.006	.016	-.007	.006
Out-of-School Suspension Rate	-.017	.010	-.010*	.004
Mobility Index	.012	.010	-.018*	.008
% Parent School Involvement	-.011	.010	.001	.002
North	.234	.137		
South	.032	.143		
Traditional School	.587**	.187		
Magnet School	.884***	.184		
Constant	-.572	1.03		
<hr/>				
Number of Observations	597			
Number of Groups	83			
Adjusted R2	.50			
Wald Chi2 (20)	362.92***			
Rho	.40			
<hr/>				
p < .05*   p < .01**   p < .001***		<sup>A</sup> unit in hundreds		

## Students' Perceptions of Leadership

Leadership is the ability to lead a group of individuals to fulfill organizational goals. Leadership is a critical component of school climate (Bulach, Boothe, & Pickett, 1998; Peterson, 1990; Sergiovanni & Starratt, 1998). “Principal's behaviors are related to school climate, e.g. effective communication, teacher advocacy, participatory decision-making, and equitable evaluation procedures” (Kelly et al., 2005, p. 20). Leadership style matters. Allen et al. (2015) found a positive relationship between transformational leadership and school climate.

The student survey does measure the leadership qualities of schools to an extent. Survey items 19 and 20 from the student survey were used for the leadership dimension. Charter school and magnet school students rated the principals of their schools more favorably than traditional public school students. Charter school and magnet school students are also more likely to perceive their assistant principals as having greater availability. Table 8 has the descriptives of the survey items.

**Table 8. Descriptives of Leadership Student Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
19. My principal does a good job running the school.	3.44	.49	3.70	.49	3.63	.52
20. The assistant principals are available when needed.	3.21	.30	3.42	.39	3.35	.40
Leadership Factor (Z-Score)	-0.24	.86	0.33	.92	0.16	1.01

The panel regression analysis demonstrated that school-type does have a statistically significant effect on students' perceptions of their administrators. Magnet schools have a higher leadership rating than charter schools and traditional schools when other factors are controlled. There is no statistically significant difference between traditional schools and charter schools. The onerous expectations and curricular programs of magnet schools require high-caliber administrators. The strong reputations that magnet schools have also attract administrators with superior qualities. The panel regression model for the leadership dimension can be found in Table 9.

Out-of-school suspensions are negatively associated with perceptions of administrative leadership. They predict both between- and within-cluster variation in leadership. It is plausible that principals that utilize suspensions more frequently are viewed as being more punitive, which would negatively impact students' perceptions of their schools' administrative leadership. Administrative availability and suspension rate could also be related. Administrative availability could be limited by administrative workload. Greater workload would permit administrators less time to investigate personal student matters. Frequent involvement in personal student matters could prevent situations from escalating into more severe acts of delinquency that warrant suspension.

School performance and parent involvement is positively associated with perceptions of school leadership. They predict between-cluster variation in leadership. Administrators can have a substantial impact on school performance by setting standards, offering support, and establishing positive cultures. High performing schools also attract high-quality administrators. High-quality administrators are more likely to get parents involved in school affairs. Parent involvement increases the effectiveness of school



administrators by introducing expectations and more accountability. Parent involvement could be a proxy measure for positive student characteristics conducive to healthy student-principal relationships.

Student mobility has a negative within-cluster association with leadership, but unexpectedly has a positive between-cluster association. The positive association could be the result of between-effects mobility index being strongly correlated with between-effects performance grade ( $r = -.72$ ), between-effects absenteeism rate ( $r = .88$ ), and between-effects out-of-school suspension rate ( $r = .72$ ). This potential multicollinearity could lead to opposite signage for between-effects student mobility. Adverse changes in leadership quality could result in student mobility increasing over time within a school as school administrators greatly influence school quality.

A school's regional location influences perceptions of leadership, with schools under the purview of the North Regional Office experiencing more favorable ratings. There was no statistically significant difference in leadership quality between the Central and South regions. The North region could be more attractive to higher-quality administrators. Additionally, the North region could be more proficient at hiring effective school administrators.

**Table 9. Within-Between Effects Panel Regression for Leadership (Student)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	.001	.009	-.007	.014
% Black Students	-.007	.004	.021	.013
% Black Teachers	.002	.009	.005	.004
Performance Grade	.025**	.009	.009	.005
% Absent 21+ Days	.010	.017	-.004	.008
Out-of-School Suspension Rate	-.033**	.012	-.013**	.005
Mobility Index	.032**	.012	-.023***	.006
% Parent School Involvement	.018*	.008	.004	.003
North	.473**	.152		
South	.028	.153		
Traditional School	.143	.220		
Magnet School	.547**	.204		
Constant	-3.61	.925		
<hr/>				
Number of Observations	597			
Number of Groups	83			
Adjusted R2	.28			
Wald Chi2 (20)	207.77***			
Rho	.26			
<hr/>				
p < .05*   p < .01**   p < .001***		<sup>A</sup> unit in hundreds		

## Students' Perceptions of Connectedness

Connectedness encompasses the quality of the interpersonal relationships present in a school. It consists of cohesion and belongingness, trust, parental involvement, cultural awareness, and student-student and student-staff relationships. Connectedness is integral to academic performance, student behavior, and school climate.

Survey items 22 and 23 from the student version were utilized for the connectedness dimension. Charter school and magnet school students rated the connectedness of their schools more favorably than traditional public school students. The two school-types rated the adults at their schools as being more caring and helpful. Descriptives of the survey items are presented in Table 10.

**Table 10. Descriptives of Connectedness Student Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
22. Adults at my school care about me as an individual.	3.08	.31	3.37	.40	3.34	.31
23. Adults at my school help me when I need it.	3.33	.30	3.57	.38	3.54	.29
Connectedness Factor (Z-Score)	-0.35	.78	0.35	1.00	0.27	.76

School-type does have a statistically significant effect on connectedness, based on the panel regression results. Traditional schools and magnet schools have a higher connectedness rating than charter schools when controlling other factors. The school district could be hiring staff and administrators that have qualities more apt to interacting with students. There are dissimilarities between public school and charter school

employees such as with experience and education credentials that could affect student-staff relationships. Table 11 has the panel regression results.

School performance has a positive association with connectedness. It predicts between-cluster variation in connectedness. High performing schools tend to have healthy student-staff relations. Students' issues that adversely affect their academic performance are more likely to be resolved when they are able to openly communicate with the adults of their schools. Students also experience superior instruction when student-staff relationships are amicable. When students feel connected to their schools, they become more engaged in learning.

Enrollment size, out-of-school suspensions, and student mobility have a negative association with school connectedness. Enrollment size predicts between-cluster variation in connectedness, Out-of-school suspensions predict both between- and within-cluster variation. Student mobility predicts within-cluster variation. Smaller schools have communal learning environments that reduce student alienation and enhance student engagement. Students in smaller schools are more likely to feel like their input matters. Extant research does show that smaller schools have stronger and more trusting relationships between students and staff (Grauer, 2018). When students feel a sense of belonging, they are less likely to be delinquent. School connectedness alleviates issues such as alienation that results in delinquency. Disciplinary actions such as issuing suspensions can increase student alienation. Frequent utilization of suspensions could impair student-staff relations, propagating distrust and sowing perceptions of an unfriendly and punitive environment. When students do not feel attached to their schools,

they are more willing to be transferred to another school. This could explain the negative association between connectedness and the mobility index.

**Table 11. Within-Between Effects Panel Regression for Connectedness (Student)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.044***	.009	-.014	.009
% Black Students	-.001	.004	.020	.011
% Black Teachers	-.004	.007	.004	.003
Performance Grade	.035***	.008	.006	.004
% Absent 21+ Days	.035*	.016	.003	.008
Out-of-School Suspension Rate	-.027**	.009	-.012**	.004
Mobility Index	.002	.011	-.014*	.006
% Parent School Involvement	.007	.009	.002	.002
North	.200	.158		
South	.266	.151		
Traditional School	.674**	.241		
Magnet School	.479*	.206		
Constant	-2.56	.885		
<hr/>				
Number of Observations	597			
Number of Groups	83			
Adjusted R2	.49			
Wald Chi2 (20)	421.10***			
Rho	.48			
<hr/>				
p < .05*	p < .01**	p < .001***	<sup>A</sup> unit in hundreds	

## Students' Perceptions of Teacher Quality

The qualities of a teacher have a significant bearing on the academic climate of school. Teachers “constitute the greatest cost and human capital resource of a school” (Collie et al., 2012, p. 2). The significant influence of teacher quality on school climate is exemplified by the plenitude of survey items that measure it. Survey items 5 and 9-15 from the student version of the survey were utilized for this dimension. Charter school and magnet school students gave more favorable ratings for the majority of the teacher quality survey items than traditional public school students. Descriptives of the teacher quality survey items are in Table 12.

**Table 12. Descriptives of Teacher Quality Student Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
5. My teachers require that I work very hard for the grades I get.	4.01	.19	4.16	.26	4.05	.24
9. My teachers are friendly and easy to talk to.	3.60	.28	3.73	.37	3.85	.28
10. My teachers make learning fun and interesting.	3.21	.27	3.37	.36	3.39	.36
11. My teachers make me want to learn.	3.27	.27	3.39	.30	3.39	.32
12. My teachers know a lot about the subjects they teach.	3.85	.22	3.97	.31	3.94	.30
13. My teachers give me meaningful homework that helps me learn.	3.26	.25	3.33	.27	3.30	.33
14. My teachers are interested in how I do in the future.	3.45	.27	3.64	.32	3.62	.32
15. My teachers let me know how I am doing on my school work.	3.60	.24	3.67	.26	3.71	.29
Teacher Quality Factor (Z-Score)	-0.27	.81	0.20	1.01	0.19	1.00

Based on the panel regression results, school-type does not have a statistically significant effect on teacher quality. If the inherent characteristics of the schools type do influence teacher quality, their effects would be mediated by other variables present in the model. The panel regression model can be found in Table 13.

District-run public schools have a higher percentage of teachers that are highly qualified, teach courses in the fields they are certified for, and possess a graduate degree. Charter schools have a higher percentage of newly-hired teachers. Interestingly, this disparity in the qualifications and experience of teachers did not appear to result in variances between the school-types on teacher quality rating. Some extant research has shown that certain teacher qualifications, such as attainment of graduate degrees and teaching certifications, have only a marginal effect on instruction (Hanushek, 1986; Clotfelter et al., 2007; Buddin & Zamarro, 2008).

School performance has a positive association with teacher quality. It predicts between-cluster variation in teacher quality. Teachers are instrumental to school performance. The pedagogy they employ determines how structured the learning environment is. High ranking schools also tend to attract teachers with good qualities. The continual employment of superior teachers ensures high performing schools stay on top.

Out-of-school suspensions and enrollment size have a negative association with teacher quality. They predict between-cluster variation in teacher quality. Student behavioral problems can stem from poor-quality teachers. Such teachers can lack the skills or the motivation to properly discipline students and encourage positive behavior. Delinquent children could also view teachers less favorably. Suspensions increase student

alienation, further deteriorating student-teacher relations. Smaller schools tend to have stronger support systems and more collaboration. When teachers work together and have support from fellow teachers and administrators, teachers are more likely to improve. The working conditions of smaller schools also attract high-quality teachers.

**Table 13. Within-Between Effects Panel Regression for Teacher Quality (Student)**

	<u>Between Effects</u>		<u>Within Effects</u>		
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>	
Enrollment Size <sup>A</sup>	-.035**	.010	.011	.009	
% Black Students	.003	.004	.005	.012	
% Black Teachers	-.012	.008	.008	.006	
Performance Grade	.034**	.010	.008	.004	
% Absent 21+ Days	.018	.020	-.011	.006	
Out-of-School Suspension Rate	-.027*	.010	-.004	.004	
Mobility Index	.014	.015	.002	.005	
% Parent School Involvement	.003	.012	.005	.003	
North	.201	.197			
South	.212	.198			
Traditional School	.575	.311			
Magnet School	.259	.302			
Constant	-2.38	1.17			
Number of Observations	597				
Number of Groups	83				
Adjusted R2	.29				
Wald Chi2 (20)	195.29***				
Rho	.53				
p < .05*		p < .01**		p < .001***	
		<sup>A</sup> unit in hundreds			



## Students' Overall Perceptions of School Climate

School climate is the atmosphere, tone, feeling, setting, character, and social milieu of schools. It is influenced by the milieu, culture, ecology, and organizational structure of schools. School-level factors, such as student mobility, student-teacher ratio, faculty turn-over, and principal changes, have a greater influence on students' perceptions of school climate than classroom-level factors (Mitchell et al., 2010).

Survey items 24-26 from the student version were used to measure overall perceptions of school climate. These survey items broadly measure the feeling and the atmosphere of the schools. Traditional public schools have the least favorable ratings on the overall school climate survey items. Magnet school students gave more favorable ratings than charter school students. Table 14 has the descriptives for the survey items.

**Table 14. Descriptives of Overall School Climate Student Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
24. I like coming to my school.	3.13	.32	3.39	.42	3.23	.36
25. I am getting a good education at my school.	3.64	.32	4.00	.39	3.82	.36
26. The overall climate or feeling at my school is positive and helps me learn.	3.28	.38	3.71	.46	3.58	.32
Overall School Climate Factor (Z-Score)	-0.36	.81	0.51	1.02	0.11	.79

Based on the panel regression results, school-type does have a statistically significant effect on school climate. When other factors are controlled, traditional public schools and magnet schools have more positive climates than charter schools. Table 15 has the panel regression results.

The way public schools are organized under a central authority, the school district, could have positive influences on their milieu, culture, ecology, and organizational structures. School district oversight appears to be beneficial for school climate. School districts can enact policies that prevent and remedy issues harmful to school climate. Such policies would affect all schools under its control. Charter schools can often choose to not apply school district policies. If a charter school did develop a beneficial policy of its own, it would not necessarily share the intricacies of the policy with other charter schools outside of its EMO network due to market competition. District-run public schools can also fall back on unions to address problems that on-site administrators or school districts are unable or willing to address. Charter schools most often do not allow for collective bargaining. District-run public schools may espouse values different from charter schools based on sectoral distinctions. School district values may be more conducive to positive school climates.

Performance grade has a positive association with school climate. It predicts both between- and within-cluster variation in school climate. Extant research has demonstrated that school climate and school performance have a reciprocal relationship (MacNeil et al., 2009). Schools with positive school climates feature environments advantageous to student learning, teachers with outstanding pedagogies, transformational leaders, and strong connectedness. These features are ideal for academic success.

Out-of-school suspensions, student mobility, and enrollment size have a negative association with school climate. Out-of-school suspensions and enrollment size predict between-cluster variation in school climate. Student mobility predicts within-cluster variation. High suspension rates can indicate pervasive behavioral issues at a school, adversely affecting school climate. Delinquency can also be a symptom of poor school climates. High student transience can also be a symptom of unfavorable school climates. Student and parent dissatisfaction with schools increases the likelihood of students being transferred to a different school. Smaller schools tend to have more favorable school climates (Cotton, 1996, 2001). Smaller schools are more likely to foster school cohesion, a necessary component of positive school climates.

Absenteeism has a negative within-cluster association with school climate, but unexpectedly has a positive between-cluster association. The positive association could be the result of between-effects absenteeism being strongly correlated with between-effects performance grade ( $r = -.76$ ), between-effects mobility index ( $r = .88$ ), and between-effects out-of-school suspension rate ( $r = .75$ ). This potential multicollinearity could lead to opposite signage for between-effects absenteeism. Adverse changes in school climate could result in absenteeism increasing over time within a school. Students are more likely to be truant when the school quality is perceived unfavorably. Absenteeism could also be a proxy measure for delinquency. Prevalent delinquent behavior negatively affects school climate.

**Table 15. Within-Between Effects Panel Regression for School Climate (Student)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.023**	.009	.011	.008
% Black Students	-.005	.004	.007	.011
% Black Teachers	.002	.007	.004	.004
Performance Grade	.040***	.008	.010**	.003
% Absent 21+ Days	.037*	.016	-.017**	.005
Out-of-School Suspension Rate	-.027**	.010	-.003	.004
Mobility Index	-.011	.011	-.012*	.005
% Parent School Involvement	.003	.010	.004	.002
North	.126	.148		
South	.016	.151		
Traditional School	.533*	.237		
Magnet School	.495*	.211		
Constant	-2.64	.939		
<hr/>				
Number of Observations	597			
Number of Groups	83			
Adjusted R2	.53			
Wald Chi2 (20)	354.19***			
Rho	.49			
<hr/>				
p < .05*   p < .01**   p < .001***		<sup>A</sup> unit in hundreds		

### **Comparative Results for Staffs' Perceptions of School Climate Factors**

To compare the variations in school climate factors between public and charter schools, panel regression models were estimated per school climate construct. Panel regressions with both between and within effects were utilized to assess the effect of school-type on school climate constructs while controlling other factors. Within-between effects panel regression permits the analysis of variables with fixed effects while simultaneously incorporating time-invariant variables such as school-type. Of the 565 cases, 324 were traditional schools, 136 were magnet schools, and 105 were charter schools. The regressions span from 2005-2006 through 2015-2016 academic years.

Fixed effects were necessary to implement due to the assumption that the predictors in the models are correlated with differences between schools. Additionally, the Hausman test (Hausman & Taylor, 1981) indicated that a model with fixed effects will produce estimates that are more consistent than a model with just random effects. An alpha score of .05 was utilized as the statistical significance level for the Hausman test. The within-between effects approach works by decomposing time-varying predictors into between and within effects components and incorporating them along with time-invariant predictors into a single random effects panel regression model. The between effect is the group mean of a cluster and the within effect is a demeaned value computed by subtracting observation values from the group mean. Demeaning corrects for between-cluster differences for predictors that vary between and within clusters.

The comparative results are subdivided into the following sections: staffs' perceptions of order and safety, staffs' perceptions of collaboration, staffs' perceptions of

ecology, staffs’ perceptions of job satisfaction, staffs’ perceptions of leadership, and staffs’ overall perceptions of school climate.

### Staffs’ Perceptions of Order and Safety

Order and safety represents the degree of physical and emotional security present in a school. Orderly schools have effective, consistent, and fair disciplinary practices. Extant research has demonstrated that perceptions of school safety and order do vary between teachers and students. Booren et al. (2011), for instance, found that teachers generally rate their schools more favorably on order and safety than students.

Survey items 1, 6, and 21-23 from the staff version were used to measure the order and safety dimension. Traditional public school staff gave the least favorable ratings on order and safety whereas charter school staff gave the most favorable ratings. Staff from all 3 school-types rated their schools more favorably than the students on the order and safety measure. Table 16 has the descriptives of the survey items.

**Table 16. Descriptives of Order and Safety Staff Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. At my school I feel safe and secure.	4.18	.39	4.45	.34	4.60	.37
6. At my school adequate disciplinary measures are used to deal with disruptive behavior.	3.59	.51	3.89	.48	3.99	.61
21. My ability to do the best possible job at this school is limited by school violence.	2.10	.51	1.56	.48	1.35	.30
22. My ability to do the best possible job at this school is limited by student gang activity.	2.03	.45	1.54	.50	1.31	.32
23. My ability to do the best possible job at this school is limited by student substance abuse.	2.37	.39	1.82	.46	1.54	.43
Order and Safety Factor (Z-Score)	-0.38	.85	0.50	.85	0.91	.63

It is worth noting the strong correlation the order and safety staff construct has with the reported incident rate ( $r = -.72$ ) and the order and safety student construct ( $r = .87$ ). The congruity suggests that staffs' and students' perceptions are reliable measures of schools' degree of order and safety. The strong correlation between students' and staffs' perceptions of order and safety indicates that they share similar experiences and that these experiences affect their perceptions similarly. Correlation discrepancies between the student and staff versions of the construct could be due to the constructs being measured at the school-level; teachers are more influenced by classroom-level factors whereas students are more influenced by school-level factors.

Survey items 21-23 were inverted for the panel regression so that all the survey items have the same polarity. A positive coefficient indicates a favorable effect on staffs' perceptions of order and safety. The panel regression model demonstrated that school-type does not have a statistically significant effect on order and safety. The factors that influence staffs' perceptions of order and safety are similar to those that influence students' perceptions. Table 17 features the panel regression results for the order and safety dimension.

Enrollment size, black student percentage, and absenteeism have a negative association with order and safety whereas school performance has a positive association. Enrollment size, black student percentage, and absenteeism predict between-cluster variation in order and safety. School performance predicts within-cluster variation. Smaller schools are more likely to have school cohesion, which deters delinquency. Black students and students that are frequently absent are more likely to have behavioral issues, adversely affecting teachers' perceptions. High-performing schools generally have

well-behaved students. When teachers work with well-disciplined students, they are more likely to feel a sense of order and safety.

**Table 17. Within-Between Effects Panel Regression for Order and Safety (Staff)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.033***	.008	.010	.008
% Black Students	-.012**	.004	-.007	.012
% Black Teachers	.005	.008	-.003	.003
Performance Grade	-.005	.008	.013***	.002
% Absent 21+ Days	-.054**	.016	-.012	.007
Out-of-School Suspension Rate	-.017	.011	-.005	.004
Mobility Index	-.001	.011	-.014	.007
% Parent School Involvement	.007	.009	-.001	.002
North	.032	.115		
South	.003	.127		
Traditional School	-.009	.229		
Magnet School	.101	.173		
Constant	1.41	.870		
<hr/>				
Number of Observations	565			
Number of Groups	82			
Adjusted R2	.68			
Wald Chi2 (20)	736.55***			
Rho	.39			
<hr/>				
p < .05*   p < .01**   p < .001***		<sup>A</sup> unit in hundreds		



## Staffs' Perceptions of Collaboration

Collaboration is a cooperative arrangement for the purpose of achieving some goal. Extant research has shown that staff collaboration has positive effects for teachers, such as a greater focus on academic and behavioral outcomes for students, improved affect, heightened efficacy, and improved knowledge base (Goddard et al., 2007).

Goddard et al. (2007) demonstrated that teacher collaboration is associated with increased levels of student achievement.

Survey items 3 and 5 from the staff version were used to represent this dimension. Charter school staff rated their schools more favorably on collaboration than traditional public school and magnet school staff. Charter school staff seem to collaborate more and have more constructive communication. Traditional public school staff have the least favorable ratings. Descriptives of the survey items are presented in Table 18.

**Table 18. Descriptives of Collaboration Staff Survey Items**

Survey Item	<u>Traditional</u>		<u>Magnet</u>		<u>Charter</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. At my school personnel work together as a team.	3.85	.38	4.00	.43	4.26	.44
5. At my school I feel that my ideas are listened to and considered.	3.73	.33	3.92	.44	4.16	.48
Collaboration Factor (Z-Score)	-0.25	.81	0.14	1.00	0.74	1.03

Based on the panel regression results, school-type does not have a statistically significant effect on collaboration. Enrollment size and absenteeism have a negative association with staff collaboration. They predict between-cluster variation in staff

collaboration. Ronfeldt et al. (2015) examined teacher collaboration among Miami-Dade public schools and found that enrollment size, but not absenteeism, is associated with collaboration oriented around instructional strategies and students. Perhaps this study found an association between absenteeism and collaboration due to absenteeism and collaboration being measured differently. The regression model is presented in Table 19.

In smaller schools, collaborative work is more likely to occur. Smaller schools foster trusting relationships and strong bonds necessary for collaborative work to occur. They are also more likely to have positive school environments that encourage attendance. Collaboration perhaps increases the attendance rate of schools by permitting administrators and staff the opportunity to work together to address factors that lead to increased absenteeism. Through collaboration, positive school environments can be created. Students are more likely to attend schools when they are educated in amicable learning environments.

**Table 19. Within-Between Effects Panel Regression for Collaboration (Staff)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.036***	.010	-.009	.015
% Black Students	-.008	.006	.003	.016
% Black Teachers	-.004	.012	-.004	.004
Performance Grade	-.003	.009	.007	.004
% Absent 21+ Days	-.063**	.019	-.012	.008
Out-of-School Suspension Rate	.008	.014	.001	.005
Mobility Index	.019	.013	-.013	.011
% Parent School Involvement	.015	.011	-.003	.003
North	.295	.166		
South	.145	.171		
Traditional School	.120	.277		
Magnet School	.087	.262		
Constant	.001	1.22		
Number of Observations	565			
Number of Groups	82			
Adjusted R2	.34			
Wald Chi2 (20)	229.46***			
Rho	.32			

p < .05\*   p < .01\*\*   p < .001\*\*\*

<sup>A</sup> unit in hundreds

## Staffs' Perceptions of Ecology

Ecology refers to the physical and material factors in an organization. School facilities and resources that are of poor quality damper teachers' work enthusiasm and their commitment to students' education (Uline & Tschannen-Moran, 2008). The way classrooms are structured, the amount of available space in them, and the learning equipment present in them affects teachers' instruction. Teachers are less effective when schools have poor ecologies.

Survey items 2 and 20 from the staff version were used to measure the ecology dimension. Charter school staff rated their schools more favorably on ecology than traditional public school and magnet school staff. Traditional public schools have the least favorable ratings. The staff of all 3 school-types gave more favorable ratings than the students on the state of their school facilities but less favorable ratings for the adequacy of learning equipment. Table 20 has the descriptives of the survey items.

**Table 20. Descriptives of Ecology Staff Survey Items**

Survey Item	<u>Traditional</u>		<u>Magnet</u>		<u>Charter</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. At my school the school building is kept clean and in good condition.	3.71	.59	3.95	.61	4.39	.52
20. My ability to do the best possible job at this school is limited by insufficient resources (e.g., funds, books, equipment, supplies, etc.).	3.01	.50	2.69	.66	2.55	.75
Ecology Factor (Z-Score)	-0.26	.83	0.23	1.02	0.75	.93

This construct has a strong correlation with students' perceptions of ecology ( $r = .74$ ). The congruity suggests that the student and staff constructs are adequate indicators of ecological quality. The strong correlation between students' and staffs' perceptions of ecology indicates that they share similar experiences and that these experiences affect their perceptions similarly. Correlation discrepancies between the student and staff versions of the construct could be due to the constructs being measured at the school-level; teachers are more influenced by classroom-level factors whereas students are more influenced by school-level factors.

For the panel regression, survey item 20 was inverted so that all the survey items have the same polarity. A positive coefficient indicates a favorable effect on staffs' perceptions of ecology. Based on the regression results, school-type does not have a statistically significant effect on ecology. The factors that influence staffs' perceptions of ecology are similar to those that influence students' perceptions. The regression results are presented in Table 21.

Enrollment size, black student percentage, absenteeism, and out-of-school suspensions have a negative association with ecology. Enrollment size, black student percentage, and absenteeism predict between-cluster variation in ecology. Out-of-school suspensions predict within-cluster variation. Larger schools tend to be located in more urban areas, which present challenges to creating amicable working environments for teachers. Black students are more likely to attend schools with subpar facilities and a deficiency of education supplies. Schools with high absenteeism and suspension rates have more delinquent students. Vandalism of school facilities and learning equipment occurs more frequently with delinquent students. Teachers that attend schools that are

larger, have high black student populations, and that have many delinquent children are more likely to work in schools with substandard physical facilities and a shortage of education supplies.

**Table 21. Within-Between Effects Panel Regression for Ecology (Staff)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.041***	.010	.013	.011
% Black Students	-.016***	.005	-.019	.016
% Black Teachers	.007	.009	-.005	.004
Performance Grade	.003	.009	.005	.004
% Absent 21+ Days	-.068**	.026	-.013	.007
Out-of-School Suspension Rate	.015	.012	-.009*	.004
Mobility Index	.020	.013	-.015	.008
% Parent School Involvement	-.010	.013	-.002	.002
North	.162	.160		
South	.130	.180		
Traditional School	.080	.261		
Magnet School	.297	.273		
Constant	1.58	1.23		
<hr/>				
Number of Observations	565			
Number of Groups	82			
Adjusted R2	.43			
Wald Chi2 (20)	241.86***			
Rho	.54			
<hr/>				
p < .05*	p < .01**	p < .001***	<sup>A</sup> unit in hundreds	

## Staffs' Perceptions of Job Satisfaction

Job satisfaction is the degree of contentment employees have with their work. It influences teachers' motivation, engagement, and commitment to teaching, which in turn has positive outcomes for student achievement (Collie et al., 2012). Job satisfaction is so similar to the concept of organizational climate, that it can be challenging differentiating the two concepts. Organizational climate is employees' shared perceptions of the work environment whereas job satisfaction is the emotional reaction to work experiences (Tsai, 2014). Job satisfaction is affected by the outcomes of the work performed and the personal value placed on the outcomes.

Survey items 25 through 28 from the staff version were used to measure this dimension. Charter school and magnet school staff responded more favorably on the job satisfaction survey items than traditional public schools staff. Charter school and magnet school staff gave similar ratings for the survey items, with the exception of survey item 28 which deals with staff morale. Charter school staff gave the most favorable ratings on that survey item. Table 22 has the descriptives of the survey items.

**Table 22. Descriptives of Job Satisfaction Staff Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
25. I feel satisfied concerning how my career is progressing at this school.	3.73	.28	3.92	.35	4.00	.41
26. I have a feeling of job security in my present position.	3.71	.35	3.87	.37	3.94	.47
27. I like working at my school.	4.24	.29	4.40	.38	4.38	.32
28. Staff morale is high at my school.	3.31	.51	3.58	.57	3.86	.52
Job Satisfaction Factor (Z-Score)	-0.27	.86	0.26	.99	0.50	1.07

School-type does not have a statistically significant effect on job satisfaction, based on the panel regression results. None of the variables in the model have a statistically significant relationship with job satisfaction. Multicollinearity is a possibility and could explain the lack of statistically significant associations. Table 23 has the panel regression results.

**Table 23. Within-Between Effects Panel Regression for Job Satisfaction (Staff)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.015	.010	.023	.018
% Black Students	-.006	.007	-.005	.017
% Black Teachers	-.002	.014	-.002	.005
Performance Grade	.018	.012	.003	.006
% Absent 21+ Days	-.036	.023	-.005	.009
Out-of-School Suspension Rate	-.013	.015	-.009	.006
Mobility Index	.011	.015	.001	.010
% Parent School Involvement	.013	.011	-.001	.003
North	.335	.174		
South	.150	.161		
Traditional School	.181	.266		
Magnet School	.129	.244		
Constant	-1.61	1.46		
<hr/>				
Number of Observations	565			
Number of Groups	82			
Adjusted R2	.38			
Wald Chi2 (20)	227.23***			
Rho	.37			
<hr/>				
p < .05*   p < .01**   p < .001***		<sup>A</sup> unit in hundreds		



## Staffs' Perceptions of Leadership

Leadership is the ability to lead a group of individuals or an organization to fulfill goals. Administrative leadership influences teacher job satisfaction, efficacy, motivation, commitment, involvement in decision-making, retention, and performance (Bogler, 2001). Principals address issues in the work environment, set organizational goals, and reinforce the values and the mission statements of the schools.

Survey items 4, 7-14, and 18 from the staff version were used to measure the leadership dimension. Charter school staff rated their administrators more favorably than traditional public school and magnet school staff. Traditional public schools have the least favorable ratings. Descriptives of the survey items are presented in Table 24.

**Table 24. Descriptives of Leadership Staff Survey Items**

Survey Item	Traditional		Magnet		Charter	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. At my school administrators solve problems effectively.	3.78	.42	3.95	.49	4.17	.56
7. My principal is an effective administrator.	4.09	.43	4.19	.46	4.47	.41
8. My principal represents the school in a positive manner.	4.30	.38	4.43	.38	4.61	.36
9. My principal demonstrates good interpersonal skills.	4.06	.45	4.14	.51	4.45	.42
10. My principal deals with conflict constructively.	4.00	.41	4.07	.48	4.37	.48
11. My principal responds in a reasonable time to my concerns.	4.11	.38	4.17	.46	4.42	.42
12. My principal treats me with respect.	4.34	.33	4.40	.37	4.62	.30
13. My principal is receptive to constructive criticism.	3.87	.40	3.94	.49	4.28	.47
14. My principal is supportive of teachers.	4.10	.42	4.22	.44	4.46	.41
18. My ability to do the best possible job at this school is limited by lack of concern/support from the principal.	2.07	.35	1.88	.41	1.76	.41
Leadership Factor (Z-Score)	-0.20	.89	0.06	1.02	0.66	.90

The congruity in students' and staffs' perceptions of administrative leadership are moderately low ( $r = 0.49$ ). This is due to the two constructs measuring different leadership attributes. The staff version of the leadership construct also consists of substantially more survey items than the student version of the construct.

For the panel regression, survey item 18 was inverted so that all survey items have the same polarity. A positive coefficient indicates a favorable effect on staffs' perceptions of administrative leadership. Based on the regression results, school-type does not have a statistically significant effect on leadership. Table 25 has the regression results for the leadership construct.

Student absenteeism has a negative association with staffs' perceptions of leadership. It predicts both between- and within-cluster variation in leadership. Problems with absenteeism can reflect poorly on a school's leadership regardless of whether its school administrators have substantial control over it. Principals are integral to ensuring that effective policies against absenteeism are implemented. School administrators can address problems with the school environment that discourage students from attending.

Just like with student's perceptions of leadership, the regional location of the schools influences staffs' perceptions of leadership, with schools under the purview of the North Regional Office experiencing more favorable ratings than the Central and South regions. The North region of the school district is perhaps hiring administrators with superior qualities or the region is more attractive to high-caliber administrators.

**Table 25. Within-Between Effects Panel Regression for Leadership (Staff)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.018	.010	-.001	.020
% Black Students	-.005	.006	.005	.022
% Black Teachers	-.000	.011	-.005	.004
Performance Grade	-.003	.011	.005	.005
% Absent 21+ Days	-.048*	.019	-.021*	.010
Out-of-School Suspension Rate	.008	.012	.003	.007
Mobility Index	.020	.014	-.016	.011
% Parent School Involvement	.014	.012	-.005	.004
North	.363*	.161		
South	.007	.172		
Traditional School	-.170	.277		
Magnet School	-.096	.267		
Constant	-.703	1.25		
<hr/>				
Number of Observations	565			
Number of Groups	82			
Adjusted R2	.19			
Wald Chi2 (20)	154.34***			
Rho	.24			
<hr/>				
p < .05*	p < .01**	p < .001***	<sup>A</sup> unit in hundreds	

### **Staffs' Overall Perceptions of School Climate**

School climate is the atmosphere, tone, feeling, setting, character, and social milieu of schools. It is influenced by the milieu, culture, ecology, and organizational structure of schools. Classroom-level factors, such as the age of the teachers, classroom management, and student behavior, have a greater influence on staffs' perceptions of school climate than school-level factors (Mitchell et al., 2010).

Survey items 33 and 34 from the staff version were used to measure staffs' overall perceptions of school climate. Traditional public school staff gave the least favorable ratings for the overall school climate survey items. Magnet school and charter school staff gave similar ratings. The staff of all 3 school-types rated the quality of the education students receive and the overall climate of their schools more favorably than the students. Table 26 has the descriptives of the survey items.

This construct has a moderately strong correlation with students' overall perceptions of school climate ( $r = .66$ ). The congruity suggests that the staff and student constructs are adequate indicators of school climate. The moderately strong correlation between students' and staffs' perceptions of school climate indicates that they share similar experiences and that these experiences affect their perceptions similarly. Correlation discrepancies between the student and staff versions of the construct could be due to: 1) the constructs being measured at the school-level; teachers are more influenced by classroom-level factors whereas students are more influenced by school-level factors. 2) The student version of the construct having an additional survey item. By removing student survey item 24 from the student version of the construct, the correlation increases to .65.

**Table 26. Descriptives of Overall School Climate Staff Survey Items**

Survey Item	<u>Traditional</u>		<u>Magnet</u>		<u>Charter</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
33. I believe children attending my school are receiving a good education.	4.04	.32	4.36	.43	4.31	.37
34. The overall climate or atmosphere at my school is positive and helps students learn.	3.89	.41	4.23	.45	4.33	.38
Overall School Climate Factor (Z-Score)	-0.28	.83	0.50	1.02	0.55	.86

School-type does not have a statistically significant effect on school climate, based on the panel regression model. The factors associated with staffs' perceptions of overall school climate are similar to the factors that influence students' perceptions. The regression results are presented in Table 27.

Enrollment size and absenteeism have a negative association with school climate. Enrollment size predicts between-cluster variation in school climate. Absenteeism predicts within-cluster variation. Smaller schools are more likely to have the conditions necessary for improvements in professional climates (Grauer, 2018). Teachers in smaller schools tend to feel more committed to their work, greater connectedness, higher job satisfaction, and more likely to feel that they are making an impact on student learning. Absenteeism can be an indicator of poor school climates. It also suggests pervasive student behavioral issues. Delinquent children adversely influence teachers' perceptions of their work environment.

School performance and parental involvement have a positive association with school climate. School performance predicts within-cluster variation in school climate. Parental involvement predicts between-cluster variation. High school performance can be

the result of a positive school climate. Teachers feel a sense of accomplishment when their students are performing at satisfactory levels. They experience greater commitment and satisfaction in academically successful schools. Parent involvement provides teachers additional support. Parent involvement is critical for student success and resolving student issues. Teachers are more likely to feel connectedness and commitment when parents participate.

**Table 27. Within-Between Effects Panel Regression for School Climate (Staff)**

	<u>Between Effects</u>		<u>Within Effects</u>	
	<i>B</i>	<i>Robust SE</i>	<i>B</i>	<i>Robust SE</i>
Enrollment Size <sup>A</sup>	-.026**	.009	-.003	.012
% Black Students	-.008	.005	.003	.018
% Black Teachers	-.002	.011	-.001	.004
Performance Grade	.014	.012	.014**	.004
% Absent 21+ Days	-.038	.021	-.019**	.007
Out-of-School Suspension Rate	.008	.013	-.002	.005
Mobility Index	-.007	.014	-.014	.008
% Parent School Involvement	.017*	.008	-.000	.003
North	.137	.126		
South	.057	.133		
Traditional School	.351	.232		
Magnet School	.377	.198		
Constant	-1.25	1.20		
<hr/>				
Number of Observations	565			
Number of Groups	82			
Adjusted R2	.54			
Wald Chi2 (20)	388.00***			
Rho	.30			
<hr/>				
p < .05*	p < .01**	p < .001***	<sup>A</sup> unit in hundreds	

## Chapter Summary

The results indicate that constructs related to milieu, culture, ecology, and organizational structure have a strong association with students' and staffs' perceptions of school climate. Student perceptions of school climate have the strongest association with the ecological construct. Staff perceptions of school climate have the strongest association with job satisfaction, which is related to the milieu and culture constructs. Extant research has shown that these constructs do have a significant bearing on school climate (Uline & Tschannen-Moran, 2008; Collie et al., 2012; Bradshaw et al., 2014), but they were not evaluated in a single study nor in examining school-types. Secondary Confirmatory Factor Analysis also demonstrated that the Annual School Climate Survey is a valid instrument for measuring school climate.

Comparative analyses demonstrated that school climate does vary between district-run public high schools and charter high schools. Charter school students and staff gave more favorable ratings for many of the school climate dimensions than their traditional public school counterparts. Magnet school students and staff often gave similar ratings as charter school students and staff.

However, when other factors are controlled, district-run public schools perform better with students' perceptions. Inherent characteristics, such as management and funding structures, are plausible predictors for multiple school climate constructs. There was no statistically significant difference between the school-types with staffs' perceptions when other factors are controlled. Enrollment size, school performance, out-of-school suspensions, absenteeism, and black student percentage were common

predictors for multiple school climate constructs. These factors explain a substantial portion of the variance between the school-types.



## CHAPTER V

### CONCLUSION

This dissertation tested two hypotheses. The first hypothesis stated that the four constructs of organizational climate (milieu, culture, ecology, and organizational structure) influence school climate. All four aspects of organizational climate significantly influence school climate. The ecology component has the strongest association with student-perceived school climate. This finding illustrates that school environment is an important component of school climate (Bradshaw et al., 2014). Evidence of physical disorder, such as vandalism, trash, and graffiti, can incite social disorder (Plank, Bradshaw, & Young, 2009). Broken-windows theory can be applied to school environments to promote positive school climates. Based on the theory, maintaining and monitoring a school's physical appearance can reduce school deviancy and, in turn, improve school climate. A school's resources can also influence its school climate. Limited supplies and substandard resources can exacerbate feelings of frustration towards a school (Grayson & Alvarez, 2008). Safety and order, teacher quality, connectedness, and leadership also influence student-perceived school climate and each other. Combined, the constructs substantially predict students' perceptions of school climate.

Job satisfaction, which is a proxy for milieu and culture, has the strongest association with staff-perceived school climate. The strong relationship between job satisfaction and school climate is well established. Collie et al. (2012), for instance, demonstrated through empiricism a significant association between school climate and job satisfaction. Factors such as supervisory support, relations with colleagues, and

discipline problems indirectly influence job satisfaction, mediated through feelings of belonging and emotional exhaustion (Collie et al., 2012). Safety and order, leadership, collaboration, and ecology also influence staff-perceived school climate and each other. These constructs combined significantly explain staffs' perceptions of school climate. The leadership of the school is particularly important. It affects all but the ecology construct among staff.

The second hypothesis stated that inherent school-type differences will result in significant variances in school climate between district-run public schools and charter schools. The study found dissimilarities in the school climate constructs between the school-types. Charter schools performed better than traditional public schools on the school climate constructs. Charter schools have superior order and safety, ecology, connectedness, leadership, collaboration, job satisfaction, and overall school climate. This mirrors the results of the Lubienski et al. (2008) study, which demonstrated charter schools outperforming traditional public schools on a number of school climate constructs such as teacher morale, conflict/student behavior, drug/alcohol use, and parent involvement.

However, when factors external to school-type operations are controlled, district-run public schools, particularly magnet schools, perform better on order and safety, connectedness, leadership, ecology, and overall school climate among students. There are no statistically significant differences with the school climate constructs among staff. The lack of dissimilarities in staff-perceived school climate, but not for student-perceived school climate, between the school-types could indicate that school-type has more influence over school-level factors than classroom-level factors. Teachers are more

influenced by classroom-level factors whereas students are more influenced by school-level factors (Mitchell et al., 2010). Further research is warranted as this study did not feature factors at the classroom level.

The more favorable ratings charter schools have on multiple school climate dimensions, relative to traditional public schools, can be attributed to their smaller memberships and advantageous student-body characteristics, such as having students that are more disciplined and academically motivated. Charter schools benefit from having parents more involved with schools, not having to backfill students that leave during the academic year, and greater latitude in expelling problematic students. District-run public schools, particularly magnet schools, have superior school climates for students when these factors external to school-type operations are controlled.

It is likely that the inherent characteristics of district-run public schools, such as with their funding and management structures, benefit school climate for students. Public-sector values, school district oversight, and collective bargaining may indirectly influence students' perceptions favorably. District-run public schools could, much like government organizations, venerate public-sector values such as lawfulness, incorruptibility, and impartiality more (Van der Wal et al., 2008). These values could be more critical to having positive school climates than private-sector values (which charter schools presumably adhere to) such as profitability, honesty, and innovativeness. Divergent value orientations are expected to result in markedly different organizational climates (Pritchard & Karasick, 1973).

School district oversight could produce greater accountability, which would have important implications for school climate. Additional oversight engenders a greater

cognition of issues that arise in traditional public schools than in charter schools.

Problems in traditional public schools are then more likely to be resolved sooner. While charter schools are often held accountable to EMOs, the latitude that some EMOs grant to charter schools with administering on-site operations means that a number of EMOs will not have the same oversight prowess as school districts. Organizational deficiencies can also be addressed simultaneously for multiple district-run public schools when under a central authority. Charter schools are a part of smaller school networks (or none at all). The fragmented system of charter schools can result in unequal treatments of organizational deficiencies. School districts could also have superior organizational practices that ultimately benefit school climate for students, such as with their hiring processes, evaluations, and personnel development.

Unions can address issues when on-site administrators or school districts are unable or unwilling to. Charters schools do not have such recourse. Teachers' grievances are more likely to be addressed when they are unionized. Under a union, teachers can advocate for student needs without facing potential retaliation. Unionized teachers are also less likely to be terminated. This results in traditional public schools having lower turn-over rates. Unions also provide teachers with professional development opportunities that improve their pedagogy. Collective bargaining could directly and indirectly benefit the school climate of students. Future empirical research examining organizational values by school-type and the effects of school district oversight and collective bargaining on school climate need to be conducted.

It is plausible that management does not differ considerably between district-run schools and charter schools. While the results do indicate variances in staffs' perceptions

of leadership quality between district-run public schools and charter schools, the distinctions were not due to school-type specific organizational practices. The study additionally demonstrated that dissimilarities between the staff of district-run public schools and charter schools on measures of job satisfaction and collaboration are not directly the result of school-type inherent characteristics.

The impact of management on staff collaboration and job satisfaction is considerable in the organizational literature (Bogler, 2001). Griffith (2004), using structural equation modeling, demonstrated that a principal's leadership style influences job satisfaction among teachers. Principals also facilitate the conditions necessary for teacher collaboration to occur (Gajda & Koliba, 2008). This study, too, demonstrated that administrative leadership is associated with job satisfaction and collaboration. If there were significant variances in management between district-run public schools and charter schools, discrepancies in leadership, job satisfaction, and collaboration would have likely been observed. This could signify that perhaps the management of district-run public schools and charter schools differs only in nonsignificant ways. This lends credence to Boyne's (2002) meta-analysis, which demonstrated that evidence of sharp differences between public and private management is limited.

The majority of the sampled charter schools were run by EMOs. EMO-run charter schools and district-run public schools can both have equally rigid, top-down hierarchies. Principals of EMO-run charter schools would have limited autonomy comparable to that of district-run public school principals. The actions of both types of principals would be similarly constrained, with both more likely to resort to a transactional leadership style than a transformational one. Gözükar and Şimşek (2015) demonstrated, using structural

equation modeling, that job autonomy facilitates transformational leadership. Independently-run charter schools generally have more on-site autonomy. Further differences in school climate could have been made evident if more independently-run charter schools were present in the sample. Future studies will need to incorporate more independently-run charter schools.

School climate is affected by organizational structure, culture, milieu, and ecology. Variations in the aforementioned constructs is evident between school-types. The idiosyncrasies of district-run public schools and charter schools produces school climate variations. The contemporary education system illustrates the significance sectoral distinctions have on organizational climate.

### **Limitations**

This study has some limitations. Since the sample of schools comes from a single school district, caution is warranted when attempting to generalize the results of this study to school districts in other states and even other school districts within Florida. Policies dealing with district-run public schools and charter schools can vary considerably between different states and school districts. Such variations can influence a myriad of factors associated with school climate. In the Miami-Dade school district, an overwhelming majority of charter schools are under an EMO, which is a significant deviation from the majority of school districts in the nation; the majority of school districts in the United States have mostly independently-run charter schools. Since extant research has shown that EMO-run charter schools have less site-based autonomy than independently-run charter schools, extrapolating the findings of this study to independently-run charter schools could be problematic.

Due to the use of voluntary surveys, participation bias could potentially be a significant limitation of this study. The characteristics of the individuals that chose not to participate is not known. These individuals could have attributes that differ from the participants in significant ways that could influence the survey results. The participation rates varied between schools, which only compounds the issue. Fortunately, the classes in each school chosen to participate in the student surveys were randomly selected. This randomization of classes mitigates biases that could result from student characteristics varying between classrooms within a school. The staff school climate surveys, though, had no randomization process as every staff member had the option to participate in the survey.

The use of secondary data and proxy measures introduces some limitations to this study. The secondary data utilized did not allow the researcher of this study to fully capture organizational constructs. The four organizational constructs could, therefore, have significantly different effects on school climate perceptions than what the findings of this study convey. The use of proxy measures is a limitation as they are not perfect substitutes for direct measurements of intended variables. Proxies are not exact as direct measures of variables.

With data already collected, “the researcher has no control over who was sampled, what constructs were measured, or how they were measured” (Greenhoot & Dowsett, 2012, p. 5). While Miami-Dade Public Schools Research Services is staffed with professional researchers, the author cannot fully vouch for the reliability and validity of the data they collect. Scrutiny of the data by the author did not reveal anything that would question the reliability and validity of the secondary data.

## **Policy Implications**

School districts collect school climate data so that individual schools become cognizant of their deficiencies. School climate data gives schools the information needed to address adverse conditions. Well-formulated actions can ensure that schools stay compliant with regulations like the No Child Left Behind Act, which requires schools to perform at satisfactory levels. For schools to effectively implement school improvement policies, they must factor in the attributes of their schools relevant to school climate. Extant studies have not analyzed the school climates of district-run public schools and charter schools to the extent scrutinized by the current study. Taking into account school-type and other pertinent factors, policy-makers can craft improvement plans that are individually tailored for schools. Superior assessments and action plans can be devised if policy-makers recognize the factors integral to school climate.

School climate must first be conceptually implemented in education policies. School climate is not adequately incorporated in many state education policies (Cohen et al., 2009). It's a missed opportunity considering that school climate as a holistic concept would fit well with contemporary policies; contemporary policies tend to focus on the school as the unit of analysis rather than individuals or groups of individuals. Incorporating school climate into evaluations would provide the means to improving school performance, school safety, attendance, student well-being, teamwork, teacher retention, administrative leadership, and many other factors vital to school quality.

Implementing school climate into school evaluations would introduce greater accountability as school climate instruments are able to accurately measure individual schools on multiple dimensions. When school climate is excluded from measures of



school quality, administrators lack the direction needed to improve the climate of their schools. With direction, there is an incentive to improve school climate. School administrators can be further incentivized to improve school climate when they become aware of the link between school climate and school performance. Greater accountability can also be achieved when the public has access to assessments of individual schools.

Principals are integral to creating healthy learning environments. They are in the unique position to identify, prioritize, and support practices that can enhance engagement, address problems, and develop and maintain processes necessary to meet school climate standards (Pickeral et al., 2009). School districts and EMOs should ensure that administrators are familiar with the standards and the current research on school climate. These can be incorporated into existing development programs for school leaders. Development programs should focus on methods to promote collaboration, connectedness, safety, job satisfaction, and other factors crucial to school climate. Workshops for principals exist that offer strategies for producing a positive school climate such as those offered by the Bureau of Education and Research and the National School Climate Center. School districts and EMOs should provide funding for school administrators to attend such training.

School districts and EMOs should regularly survey principals on school climate as they may offer perspectives that are unique from students, staff, and parents. School administrators can give insights as to how every activity affects the climate of their schools. School districts and EMOs should engage with principals on school climate frequently as they are in the best position to evaluate and implement school climate standards. Generating positive school climates will require having school leaders that are

able to “support the teachers in their work and help maintain equilibrium between standards-based instruction and curricular innovation, creativity, and independence” (Scallion, 2010, p. 28). School districts and EMOs should therefore look for qualities associated with transformational leadership such as self-motivation, vision, and creativity when hiring principals. It is also recommended that school districts and EMOs should consider the potential costs of transferring effective on-site administrators alongside the presumed benefits of having those administrators assume leadership positions in school district or EMO offices (Grissom & Bartanen, 2018).

In order for principals to become successful leaders, they must not only be given directives but also sufficient autonomy. School administrators will not feel responsible for the state of their schools if they lack discretionary power. When their actions are connected to the outcomes of their schools, they attain true accountability over their schools’ climates. Principals will be more invested in raising teachers’ work satisfaction, a critical component of a healthy organizational climate. Effective principals utilize creative strategies such as team-building exercises to promote collaboration and raise staff morale. They also engage with teachers frequently and are open to their ideas and criticisms.

Interaction with stakeholders such as parents and students is also vital to having a positive school climate. Getting other parties involved assists principals in identifying and finding solutions to school deficiencies. Having the community involved also increases the likelihood that proposed budgets for school improvements pass. While it is important that principals ensure that standards are being adhered to, they must also be given flexibility in how they operate their schools. Individual schools often require

individualized solutions to address school issues. School districts and EMOs should seek input from on-site administrators when formulating improvement plans as this will increase principals' successes in tackling the unique challenges of their schools.

Investments should be made towards improving the physical environments of schools. The U.S. Department of Education found that 53% of schools surveyed need repairs, renovations, and modernizations to attain a good rating (Alexander & Lewis, 2014). It is estimated that more than 50% of school facilities have environment problems such as water damage, inoperable HVAC systems, and ineffective cleaning (American Society of Civil Engineers, 2017). A 2016 report published by the 21<sup>st</sup> Century School Fund found that the United States is not investing enough on school facilities, projecting a \$46 billion annual gap in repairs and construction if the trend of underspending continues (Filardo, 2016). The Center for Green Schools (2013) estimates that \$542 billion will be required over the next 10 years to modernize the nation's public schools.

Improving the physical environments of schools will lead to positive learning environments. Satisfactory well-sanitized physical environments can produce higher student achievement, improved student behavior and conduct, reduced cases of illness, and higher teacher retention (Berry, 2002). While improvement projects can be expensive, investment can actually result in savings in the long run. By making school facilities sustainable, schools can save on energy expenses. According to the EPA, approximately \$6 Billion is spent annually on school energy costs, the second highest expense for school districts after salaries (Energy Star, 2013). They estimate that a quarter of those costs could be reduced by making schools green (Chayacani & Toy, 2017). Costs of school building improvements can also be recouped by making schools

more attractive to families, boosting funding as a result of increased enrollment. Housing near attractive schools also increase in value, resulting in property tax growth.

Community use of facilities will also become more frequent, further mitigating costs.

The case of Charles Young School demonstrates the positive impacts of improving physical environments. In 1997, the school was in disrepair, suffering from water leaks, mold growth, uncomfortable temperatures, pest infestation, damaged surfaces, and hazardous materials (Berry, 2002). After extensive repairs and renovations, the school experienced a dramatic rise on standardized test scores, increased student attendance, improved student and teacher attitudes, higher teacher retention, reduced health complaints, greater parent involvement, more frequent community use, and an improved image in the community.

Neilson and Zimmerman (2014) found that school construction projects that were completed in Connecticut's New Haven school district by 2010 led to increases in reading test scores by 0.15 standard deviations, a 10.3% rise in housing values of affected neighborhoods, and a 17.3% increase in enrollment in the schools that underwent renovations. The authors utilized a difference-in-differences method that compared schools that underwent construction with schools that did not before and after the timeframe of the construction projects.

Plank et al. (2009) applied the broken windows theory to determine whether physical disorder in schools results in social disorder. Broken windows theory postulates that areas of visible signs of physical disorder such as graffiti and litter encourages delinquency. Utilizing path analysis, the authors found that physical disorder directly effects social disorder over short spans of time and indirectly through fear and collective

efficacy over longer spans of time. The aforementioned studies demonstrate that investments in school infrastructure and prompt action against visible signs of disorder can lead to measurable improvements in schools.

Academic achievement is not the only school-related outcome. School climate is also an important indicator of school effectiveness. Comparative assessments of district-run public schools and charter schools become richer when school climate is included. Through the inclusion of school climate, the reasons for school-type variance in academic performance can be better understood. The influence of autonomy and sectoral distinctions on school performance is indirect; their impact on school performance is through mediating factors related to milieu, culture, ecology, and organizational structure.

Further research needs to be conducted to not only uncover more knowledge, but to illuminate the relevance of the school climate concept and school-type organizational practices. Policy-makers must be made aware of the implications school climate and school-type has on the modus operandi of schools. Once legislators start to embrace school climate concepts and factor-in school-type idiosyncrasies, education policies that are more effectual will be penned.

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## Appendix A

### Example of Annual School Climate Survey School-Level Aggregated Responses

#### (Student Version)

<b>SCHOOL CLIMATE SURVEY</b> <b>REPORT FOR THE 2015-16 ADMINISTRATION</b> <b>Feedback from Students (Ver. 1)</b>	SA = Strongly Agree		D = Disagree							
	A = Agree		SD = Strongly Disagree							
	U/U = Undecided/Unknown									
	PERCENT RESPONDING IN EACH CATEGORY									
	YOUR SCHOOL					ALL SENIOR SCHOOLS				
	SA	A	U/U	D	SD	SA	A	U/U	D	SD
<b>7011-AMERICAN SENIOR HIGH</b>										
1. I feel safe at my school.	14	56	23	2	5	31	48	13	5	3
2. My school building is kept clean and in good condition.	5	16	20	32	27	18	40	17	18	7
3. Students in my school usually follow school rules.	2	26	32	24	16	12	34	26	19	9
4. There are too many students in my classroom and that affects how much I learn.	11	11	22	42	13	6	12	16	45	21
5. My teachers require that I work very hard for the grades I get.	28	33	21	10	7	38	45	11	4	2
6. My school has enough books and equipment to help me learn..	17	30	31	13	9	23	41	18	12	7
7. Food served for lunch at my school looks good and tastes good.	2	10	21	17	50	5	14	23	21	37
8. I like the choice of classes I have at this school.	12	25	23	19	21	19	39	17	15	9
<b>My teachers: (Items 9 - 15)</b>										
9. ... are friendly and easy to talk to.	10	29	26	23	12	23	47	18	8	4
10. ... make learning fun and interesting.	6	18	33	27	16	13	36	27	17	6
11. ... make me want to learn.	7	20	32	22	20	14	37	27	15	6
12. ... know a lot about the subjects they teach.	18	30	34	7	10	29	47	16	6	3
13. ... give me meaningful homework that helps me learn.	10	18	21	24	28	14	36	24	16	10
14. ... are interested in how I do in the future.	13	20	34	18	15	22	37	25	10	6
15. ... let me know how I am doing on my school work.	11	24	26	18	21	23	43	17	11	5
16. Violence is a problem at my school.	9	16	40	24	12	5	8	17	34	36
17. Gangs are a problem at my school.	7	10	29	29	25	3	4	15	27	50
18. Student drug and alcohol use are problems at my school.	15	16	33	22	15	6	11	24	27	32
19. My principal does a good job running the school.	8	19	32	14	27	23	36	26	8	8
20. The assistant principals are available when needed.	10	17	44	11	19	16	33	33	10	8
21. My guidance counselor helps me with school and personal problems.	18	17	35	13	16	23	33	27	9	8
22. Adults at my school care about me as an individual.	5	19	33	20	23	16	33	33	12	7
23. Adults at my school help me when I need it.	7	27	36	13	17	17	43	26	9	5
24. I like coming to my school.	7	21	17	21	34	15	33	23	13	16
25. I am getting a good education at my school.	8	25	30	17	19	25	48	17	6	4
26. The overall climate or feeling at my school is positive and helps me learn.	8	16	35	24	16	18	39	27	11	6
27. I ride a Miami Dade County Public School bus to school and I like it.	2	7	37	13	40	7	12	42	13	26
28. I have an electronic device that can be brought to school on a daily basis.	38	28	8	13	12	41	28	12	8	11
29. What overall grade (A, B, C, D, or F) would you give to your school during 2015-2016?	Average Grade: C					Average Grade: B				

## Appendix B

### Example of Annual School Climate Survey School-Level Aggregated Responses (Staff Version)

<b>SCHOOL CLIMATE SURVEY</b> <b>REPORT FOR THE 2015-16 ADMINISTRATION</b> <b>Feedback from Staff (Ver. 1)</b>	SA = Strongly Agree      D = Disagree					A = Agree      SD = Strongly Disagree									
	U/U = Undecided/Unknown					PERCENT RESPONDING IN EACH CATEGORY									
	YOUR SCHOOL					ALL SENIOR SCHOOLS									
	SA	A	U/U	D	SD	SA	A	U/U	D	SD					
<b>7011-AMERICAN SENIOR HIGH</b>															
<b>At my school: (Items 1 - 6)</b>															
1. ...I feel safe and secure.	39	47	6	6	2	54	34	5	5	2					
2. ...the school building is kept clean and in good condition.	31	37	3	23	6	36	41	6	13	4					
3. ...personnel work together as a team.	31	45	6	16	2	36	43	9	10	3					
4. ...administrators solve problems effectively.	37	32	15	6	10	37	38	11	10	4					
5. ...I feel that my ideas are listened to and considered.	28	41	8	18	5	35	37	13	10	5					
6. ...adequate disciplinary measures are used to deal with disruptive behavior.	29	50	2	15	5	31	37	11	14	6					
<b>My principal: (Items 7 - 14)</b>															
7. ...is an effective administrator.	38	36	8	7	11	51	30	10	5	4					
8. ...represents the school in a positive manner.	26	43	8	8	5	59	30	6	3	2					
9. ...demonstrates good interpersonal skills.	27	35	10	15	13	53	29	7	7	4					
10. ...deals with conflict constructively.	36	33	13	11	7	48	26	15	7	3					
11. ...responds in a reasonable time to my concerns.	43	38	8	7	5	53	27	12	5	3					
12. ...treats me with respect.	47	35	5	7	7	62	28	5	3	2					
13. ...is receptive to constructive criticism.	36	33	15	3	13	46	22	22	5	4					
14. ...is supportive of teachers.	36	34	10	8	11	53	28	11	6	3					
<b>My ability to do the best possible job at this school is limited by: (Items 15 - 23)</b>															
15. ...too many students in each class.	19	24	16	31	10	21	26	9	31	13					
16. ...student deficiencies in basic academic skills.	39	37	8	10	6	26	34	9	21	9					
17. ...lack of concern/support from parents.	23	38	13	18	8	17	30	13	29	12					
18. ...lack of concern/support from the principal.	11	10	11	40	27	4	7	12	42	35					
19. ...lack of concern/support from the district administration.	16	13	25	30	16	7	11	27	35	20					
20. ...insufficient resources (e.g., funds, books, equipment, supplies, etc.).	18	31	10	24	18	13	22	11	34	21					
21. ...school violence.	5	7	16	36	36	3	5	9	38	45					
22. ...student gang activity.	3	5	19	34	39	2	4	11	34	49					
23. ...student substance abuse.	10	12	17	35	27	3	10	18	33	35					
24. Students generally come to my class at the beginning prepared for the grade level or courses I teach.	6	29	10	32	23	10	35	13	32	11					
25. I feel satisfied concerning how my career is progressing at this school.	23	36	15	13	13	30	43	13	9	5					
26. I have a feeling of job security in my present position.	28	44	11	5	11	31	46	12	7	4					
27. I like working at my school.	39	39	8	10	5	53	35	8	3	1					
28. Staff morale is high at my school.	16	16	10	38	20	24	33	18	16	8					
29. I frequently feel overloaded and overwhelmed while working at my school.	18	30	10	28	13	12	29	13	35	11					
30. Annual teacher evaluations are fair and reasonable.	19	32	19	13	16	21	38	22	12	8					
31. Annual teacher evaluations are used to improve teacher performance.	13	30	27	17	13	18	35	25	15	8					
32. Inservice programs keep me informed of the latest educational strategies.	20	60	8	7	5	22	51	14	10	3					
33. I believe children attending my school are receiving a good education.	24	54	8	8	5	36	49	9	5	1					
34. The overall climate or atmosphere at my school is positive and helps students learn.	20	48	13	7	12	35	46	10	6	2					
35. What Overall Grade Would You Give Your School?	School Average Grade: D-					Group Average Grade: B									



## VITA

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