Pathways to Student Engagement in School:

Exploring the Effects of School Climate on School Engagement

By

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Abstract

Student engagement in school is an important precursor to a successful and secure future. Through interaction, investment, and interest in school, young people develop a sense of belonging and connection to their community, feel empowered, and gain a sense of agency and control over their lives. In the short term, students who perceive value in the content they are learning and enjoy being at school tend to achieve at high academic levels. In the long term, engaged students tend to be socially conscious are prepared to participate in democracy.

Engagement stems from school climate factors including safety, relationships, teaching approaches, peer norms, and school structure. Together, these school climate factors, when working in concert, provide conditions in which students can thrive academically, socially, and personally. Despite agreement among researchers and school practitioners that school climate is critical for students' cognitive and emotional engagement in school, few studies analyze the associations of multiple characteristics of school climate with engagement. Even fewer school-based studies take into account the degree to which student voice in decision-making correlates with various dimensions of engagement.

This study examined the associations between high school students' perception of school climate and their self-reported engagement in school. Using survey data collected from 513 high school students attending traditional, alternative, and a democratic school, the study focused on how three domains of school climate (supportive teachers, youth voice, and safety) influenced two dimensions of engagement (emotional and cognitive). The results of multiple regressions with tests for mediation found that each characteristic of school climate significantly predicted students' emotional engagement, which in turn, had significant positive effects on their cognitive engagement. Importantly, the results indicated that youth voice in decision-making was the only

climate variable that had significant direct effects on emotional engagement as well as cognitive engagement. Finally, the study's results showed that attendance at the democratic and alternative schools had positive effects on student engagement, suggesting important setting-level effects or nuances in the institutional atmosphere of these schools.

Overall, this study makes important contributions to the school climate and engagement literature by providing further evidence that setting-level characteristics of schools are important predictors of student engagement. By identifying a mediating role of emotional engagement, the results have important practical implications for school reform and for schools interested in identifying strategies to maximize student engagement of their students. The findings may be particularly salient for advocates and researchers of social-emotional learning. Finally, this study provides evidence that youth voice in decision-making, a dimension that is commonly absent in many school settings, is an instrumental and foundational element of school climate that should be integrated, prioritized, practiced, and nurtured.

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CHAPTER 1

INTRODUCTION & STUDY PURPOSE

Statement of the Problem

Public schools are influential socialization contexts. Schools offer young people the basic knowledge and skills required to secure career and personal success. Beyond reading, writing, and arithmetic, public schools play a vital role in providing young people with opportunities to gain the social-emotional competencies to function as citizens (Cohen 2009; Apple & King 1977). Schools are social institutions where young people learn how to cooperate, communicate, and form political and civic beliefs (Flanagan et al., 2010).

Researchers and educators agree: to reap the benefits of public education, individual students must be engaged in their own learning. Engagement, generally defined, is a student's interest and investment in learning and school activities (Appleton, Christenson & Furlong 2008). Yet for many young people, for a variety of reasons, school is not an engaging experience. Student disengagement can take a variety of forms, ranging from dropping out of school to quietly complying with school rules and assigned tasks but with minimal effort or knowledge retention (Schlecty 2011). Disengaged students have increased risk behaviors such as substance abuse, teen pregnancy, depression, violence, delayed graduation, crime, and dropping out of school (Li and Lerner 2011; Manlove 1998; Wright et al 2015; McGee, Taylor, & Williams, 2007).

National high school dropout statistics illustrate the alarming extent of the school disengagement problem. In the United States, only 25% of high school freshman graduate on time. While the national dropout rate has decreased to 7.4%, over 1.2 million students still drop out each year (Miller 2015, Silver 2015, ED 2014). At a national level, there are clear racial

disparities when it comes to disengagement. Nationally, the graduation rate for black males is 28 percent less than the rate for white students. In some states, such as Wisconsin, the graduation gap between black and white students is as high as 51 percentage points (Schott 2015). Other indicators of disengagement such as school suspensions and expulsions statistics show disproportionately high rates of disciplinary action for black and Hispanic students (Schott 2015). Black and Hispanic students also have significantly lower math and reading proficiency scores compared with white peers (ED 2015, Schott 2015).

Dropout and disciplinary statistics are the most publically visible and alarming consequences of disengagement. Not reflected in those statistics are less recognizable indicators of disengagement such as passive disinterest in school. Some researchers estimate that as many as 40 to 60 percent of high school students are chronically disengaged from school (Klem and Connnell 2004). One recent national study found 50% of high school students were bored or did not enjoy being at school (Corso et al 2013). This category of students are referred to as "invisible" students – students who attend school, but are disinterested in academics, quietly passing courses but retaining few academic, social, or civic skills (Schlecty 2015; Osterman 2000; Jimmerson 2003). While these students do not dropout of school, they may have increased risk behaviors (Wright et al., 2015).

The concept of school engagement has become a topic of interest in a variety of disciplines including psychology, education, and sociology. The interest in school engagement is also gaining attention among school officials, administrators and teachers seeking practical solutions to school safety, academic performance, and social/civic preparation of all students. For example, explicitly attending to school climate is a recommended approach for schools receiving US Department of Education School Improvement Grants (SIG) (CEP 2012). While

researchers tend to focus of prior theory and the role of school engagement as a mediator of larger academic, civic, and social outcomes, educators focus on the everyday realities that exist in their school, finding innovative solutions and strategies in practice (Li, Lerner and Lerner 2009; Fredericks, Blumenfeld & Paris 2004). On both fronts, the general belief is that student engagement is determined by a constellation of micro and macro level socialization contexts (Shernoff and Schmidt 2008).

Most agree that school engagement is an outcome of dynamic environmental factors that exist inside and outside of the school walls (Davis and Warner 2015). Student socioeconomic status, race, gender, family cohesiveness, religion, and multitude other external non-school factors influence student engagement in school (Annuziata, Hogue, Faw, Liddle, 2006; Hill & Tyson, 2009; Sirin & Rogers-Sirin, 2004; Taylor & Lopez, 2004). While schools cannot intervene outside of the school walls, they can implement policies within the school to improve school climate. Several studies have examined the effects of school climate interventions and found some school-based interventions to have positive effects on engagement that occur regardless of socio-economic factors (Tarter & Woolfolk Hoy 2006; Davis and Warner 2015).

School-based climate factors including the relationships that exist among students and teachers, environment free of bullying, and opportunities for students to actively participate in their own learning and school decisions are commonly associated with elevated levels of student attachment and engagement in school (Wang and Eccles 2012). From both research and practice perspectives, the connection between school climate and engagement are interesting because school climate can be monitored and adapted to maximize engagement (Fredericks et al 2008; Blum 2004).

With engagement as a desired outcome, many schools have implemented school climate restructuring and reform initiatives such as democratic schools, community schools, place-based learning, and project-based learning. Drawing from the work of Dewey (2008), Durkheim (1956), and Kohlberg (1972), these approaches share the perspective that the school itself is a community. These approaches also include common elements, defining community-building ingredients in similar ways, including respectful relationships among students and teachers, student-driven learning, and inclusion of students in making school policy (Cohen 2009; Power &A Higgins-D'Alessandro 2008). According to these approaches, the aim of education is human development, with the desired outcome being fully prepared, moral, socially and civically engaged young adults (Power, Higgens & Kohlberg 1991).

Building from these approaches is Youth-Adult Partnership (Y-AP). In school and non-school settings, Y-AP is proving to be a promising approach for positive youth development and organizational improvement (Camino 2005; Mitra 2008; Wong Zimmerman and Parker 2010; Zeldin et al., 2013). Defined as young people and adults working together, over time, on mutually important matters, Y-AP encompasses the relational, goal-oriented, developmental, and transformative underpinnings of most common school climate reform strategies (Jones and Perkins 2004; Zeldin et al., 2013). Y-AP is both a theory and a community practice that occurs in a variety of settings, including governing boards, non-profits, after school programs, school governance, and community coalitions (Zeldin 2012, 2014; Mitra 2014). Recent studies have attributed the efficacy of Y-AP to its priority on elevating youth voice in decision-making within the context of respectful and reciprocal youth and staff relationships (Krauss, Collura, Zeldin 2014; Zeldin, Gauley, Krauss, Kornbluh & Collura 2015). With youth voice and supportive adult relationships as critical instrumental factors, Y-AP promotes a sense of safety, mutual respect,

and common purpose among participants. Consequently, Y-AP builds community within a setting, be it as large as a school or as small as a classroom.

Y-APs effectiveness as a practice is that it generates organizational norms of respect, trust, and shared decision making. By doing so, Y-AP commonly results in benefits for individuals as well as improved organizational effectiveness. This is well documented in qualitative and quantitative studies. Less is understood about how Y-APs central constructs, youth voice and supportive adult relationships, function and support one another. Multiple studies have found supportive teachers to be positively correlated with a variety of positive youth development outcomes, including student engagement (Wang and Eccles 2012; Flanagan and Stout 2010; Wong 2010). However, to date, few studies have focused attention on the potentially influential role of youth voice for promoting positive school climate and school engagement. Recent evidence suggests that both voice and support are independently strong predictors of engagement but they have the strongest total effect when operating together (Serido, Borden & Perkins 2011; Zeldin & Krauss 2015). The proposed study builds on this existing research by examining the ways youth voice mediates other dimensions of school climate.

Purpose of Study

This study's primary purpose is to identify the most salient elements of positive school climate with the intent of understanding how key foundational elements interact to promote student engagement in school. Based on prior research that school climate consists of three domains: (1) Supportive Teachers (2) Youth Voice (3) Safe Environment, the study unpacks how student engagement happens by explaining how these three foundational elements of school environment interact to maximize student engagement in school. The secondary purpose of the

study is to contribute to school practice by developing an empirically based framework that can be used for building, monitoring, and evaluating school climate.

Research Questions

This study explored how three distinct components of school climate, youth voice, supportive teachers, and a safe learning environment affected students' emotional and cognitive engagement at school.

Research Question 1: To what extent do student perceptions of safety, teacher support, and voice in decision making affect their level of cognitive engagement?

1a: Do these associations vary by the type of school a student attends? (Does the model hold across contexts?)

Research Question 2: To what extent do student perceptions of safety, teacher support, and voice in decision making affect their level of emotional engagement?

2a: Do these associations vary by the type of school a student attends? (Does the model hold across contexts?)

Research Question 3: What are the pathways connecting student perception of safety, support, and voice to emotional and cognitive engagement?

3a: Does youth voice mediate the relationship between teacher support and cognitive engagement?

3b: Does youth voice mediate the relationship between teacher support and emotional engagement?

3c: Does emotional engagement mediate safety, voice, and teacher support?

3d: Do these pathways function in similar ways across settings?

Significance of Study

This study contributes to a growing body of scholarly work focused on identifying factors of school climate that contribute to student success. It makes significant contributions in three areas. First, it contributes to literature on school engagement by offering evidence of school practices that determine students' emotional and cognitive engagement in school. Second, with the emphasis on understanding how the operational components of Youth-Adult Partnership (Supportive Adult Relationships and Youth Voice in Decision Making) interact and are correlated with engagement, the study contributes to a growing body of evidence of effective practices (especially Y-AP) for promoting positive youth development in a variety of settings, including schools. Finally, this study has practical implications for school improvement as the findings offer empirically based evidence to support approaches that may generate school environments that bolster student engagement.

Terminology

This study draws on research from multiple academic fields that use different terms to describe similar concepts. For example, research from the youth development field frequently speaks about *program engagement* and *youth engagement*, which are equivalent to the concepts of *school engagement* and *student engagement* in education research. Throughout this dissertation, I also use the terms *student /youth engagement* and *school /program engagement* interchangeably to convey the idea that a student is engaged in the activities at the school / setting / program they attend. Similarly, references to *teachers* or *school staff* are equivalent to *adults*, *adult staff*, and *youth workers*. Finally, I follow the tradition of previous research that

uses *school climate*, *school culture*, and *learning environment*, to refer to the "internal quality and character of school life" (Davis and Warner 2016; Cohen et al. 2009).

Organization of Chapters

This dissertation draws from research and theory on school climate and school engagement. The study explores how school climate factors are associated with school engagement outcomes. I apply Youth-Adult Partnership as an overarching conceptual and theoretical framework to examine school climate effects on student engagement. In Chapter 2, I introduce key theoretical concepts and prominent empirical studies on school engagement. In Chapter 3, I present key concepts and research on school climate. Chapter 4 outlines the conceptual framework and research questions for the study. I discuss the links between school climate and engagement, and I introduce Youth-Adult Partnership as a theory and practice that encompasses and connects setting-level factors with outcomes for individuals. Chapter 5 focuses on the study methodology. In Chapter 6, I present the results of the analysis. Finally, I discuss implications of the findings in Chapter 7.

CHAPTER 2

THEORY AND RESEARCH ON SCHOOL ENGAGEMENT

The concept of school engagement is widely considered a critical precursor to important school outcomes and youth development outcomes alike. A growing body of research supports the idea that engaged students, those who are interested, involved, and motivated to learn, have higher levels of academic achievement, self-esteem, and sense of agency compared with students who are bored and disconnected. In this chapter, I discuss the key theoretical elements of school engagement, and review prominent research on how the concept is operationalized.

School Engagement Theory

School engagement is recognized as a multi-dimensional construct consisting of three distinct components: behavioral engagement, emotional engagement, and cognitive engagement (Fredericks, Blumenfeld, and Paris 2004). School engagement theory suggests that a student's interest and attachment to school are influenced by the interactions of individual students with multitude environmental factors (Fredericks, Blumenfeld, and Paris 2004; Finn & Rock 1997). As it is influenced by context, school engagement theory posits that engagement is malleable (Fredericks et al., 2004). Alterations in school climate, culture, or curriculum, for example, will affect levels of engagement among individual students (Finn 1989, Fredericks et al., 2004). Therefore, school-based interventions can be taken to promote engagement. There are three types of engagement, according to researchers:

- *Emotional Engagement*

  Emotional engagement refers to a student's sense of attachment, respect, feelings of belonging, and perception of support within the school environment (Fredericks et al., 2004). Emotional engagement is important to the overall construct as it strongly

correlated with participation in school activities, and directly associated with attendance and behavior (Finn 1989).

- *Cognitive Engagement*

  Cognitive engagement refers to a student's interest and investment in their schoolwork (Greene, Miller, Crowson, Duke, Akey, 2004; Yazzie-Mintz 2007). Cognitively engaged students are motivated to complete their schoolwork, and are able to self-regulate their effort completing tasks as they perceive value in what they are learning for their future (Newman et al., 1992; Wehlage et al., 1989).

- *Behavioral Engagement*

  Behavioral engagement is recognized as a student's adherence to school rules, classroom participation, and capacity to stay away from "risky" behaviors such as skipping school (Fredricks et al 2004; Finn & Rock 1997). The behavioral aspect of engagement is frequently emphasized in empirical studies related to prevention and studies focused on reducing problems such as drug use and dropping out of school. It is also subject to criticism for its association with compliance-based engagement, which many scholars argue is not engagement at all (Zynigier 2008).

The Engaged Student

Among school engagement scholars, there is agreement on the types of school engagement. We know what engagement looks like, and multiple tools exist for identifying whether or not a student is engaged (Juvonen, 2007; NSCC 2016; Gallup 2016). The three dimensions of engagement are context driven, and mutually supporting (Appleton et al 2008, Wang and Peck 2013). That is, context – the school rules, norms, curricula, and relationships are associated with engagement. Students who are emotionally engaged typically have high

cognitive engagement as well. Research indicates that engagement is also self-reinforcing, engaged students will demonstrate aspects of each dimension and sustain engagement over time (Finn 1989; Appleton et al., 2008). Highly engaged students can be characterized as being interested in learning, proud of their school, involved in a variety of school activities, supportive of others, and generally well behaved (Fredericks et al., 2004). These students will perceive value in education, and feel competent and in control of social relationships and their own learning (Skinner & Belmont 1993; Wang and Eccles 2013).

Key Factors Influencing Engagement

While we know much about the types of engagement, there is less clarity regarding the factors that facilitate engagement. Why are certain students engaged while others are not? How do students become engaged? What factors promote sustained engagement? Which factors are most influential? The answers to these questions are pivotal to identifying school-based strategies, processes, and interventions to ensure broad engagement of all students in any given school.

Supportive Teachers and School Staff

The support of teachers and other adult staff is a critical factor determining student engagement (Fredericks et al 2004). Multiple studies have found that teacher support may be a stronger predictor of school engagement, as well as an influential factor determining overall school climate (Wentzel 1998; Lam et al., 2009). Research has also shown a strong connection between a student's perception of support from teachers and emotional engagement (Bryk and Schneider 2002; Elmore 1996). Teacher support may take a variety of forms and degrees of intensity, but is most influential when it is characterized by caring and respect, which are subjective and relational (Noddings 1992). While perceived support is inherently subjective, research has shown correlations between school engagement and students perception that

teachers are caring, have clear expectations, and adjust instructional strategies to meet the needs and levels of students (Klem and Connell 2004; Urdan and Midgely 2003). Supportive teacher-student relationships provide students with a sense of autonomy and choice that are associated with motivation (Skinner et al., 2008). Some researchers have found teacher-student relationships to be particularly important for school success among low-income and minority youth (Rodriguez 2008), but essential for high levels of engagement of any young person (Kelm and Connell 2004).

Despite this evidence that teacher-student relationships affect school engagement, there is surprisingly less empirical evidence about the association between teacher support and youth voice (i.e sense of autonomy). Similarly, there is also uncertainty about how teacher support is correlated with a student's sense of feeling safe at school. Part of the challenge of researching these associations is the subjective nature of relationships. Other challenges, according to some researchers, are that student teacher relationships are often subject to broad social norms, bureaucratic structures and nuanced needs for psychological support for different developmental stages of youth (Kelm and Connell 2004). This had led many researchers (Klem and Connell 2004; Rodriguez 2008; Mitra 2008, Serido et al., 2011, Zeldin et al., 2015), to call for research aimed at analyzing the association between youth voice, support, and engagement, with the goal of identifying the functioning of support for diverse groups of students in a variety of contexts.

Youth Voice in Decision Making

In out-of-school contexts, research has shown youth voice to be a strong predictor of program engagement and positive youth development outcomes. Recent quantitative studies suggest youth voice in decision-making determines a young person's sense of agency, sense of community, and empowerment (Zeldin et al., 2013, 2015). Zeldin, Collura, Krauss (2013) found

that voice was a stronger predictor of youth empowerment compared with familial contexts, supportive adult relationships, and sense of safety. Notably, related studies replicated these results in a variety of contexts, including across countries (Zeldin et al., 2015; Krauss and Kornbluh 2017). These quantitative studies support a large body of qualitative literature that identifies youth voice in decision making as a factor determining participant interest and engagement in community-based afterschool programs (O'Donogue and Strobel 2007; Camino et al 2005; Kirshner 2009). There is also a growing number of qualitative studies demonstrating the critical function of youth voice in school contexts (Mitra 2003, 2008; Rodriguez 2011). Recent quantitative studies on school climate and engagement have examined some aspects of youth voice (sense of autonomy, choice) using multiple regression and structured equation models with similar findings (Wang and Eccles 2013; Davis and Warner 2015; Krauss and Kornbluh 2017). Despite this base of evidence, there remains a notable absence of studies on youth voice in literature and inclusion of student voice in the daily practice of most public schools.

Recent studies offer evidence that youth voice might mediate the effects of elements of school climate and engagement. This is to say, the effects of teacher support for example, are experienced when a student has voice in decision-making. Wang and Eccles (2011, 2015) longitudinal studies that included measures related to youth voice, such as choice and sense of autonomy, showed direct associations between voice and engagement outcomes. Those studies, and similar engagement related research (Ramey et al 2016; Zeldin et al 2013; Davis and Warner 2015) found a potential for youth voice to mediate other aspects of school climate and engagement, but stop short of statistical tests for partial or full mediation. Statistically speaking, mediation can be identified when a significant association between a predictor variable and an

outcome becomes insignificant upon inclusion of an additional predictor (Baron and Kenny 1986). Qualitative evidence also suggests mediation, with youth consistently identifying voice and support as influential and related concepts affecting their participation in after-school and school programs (Mitra 2012; Evans 2007). Serido, Borden, and Perkins (2011) study of 748 youth participating in Y-AP initiatives found youth voice to mediate the relationship between adult support and positive youth development outcomes, like school engagement. There is a clear need for research examining the role youth voice plays in schools as well as in how youth voice supports youth development generally. Empirical research aimed toward understanding how youth voice functions in a variety of developmental contexts is needed to fill a void in the conceptual and academic literature. Beyond contributions to academic work, such research could have practical implications for schools searching for realistic and effective school climate interventions.

Safe Learning Environments

When individuals feel physically and emotionally safe in any setting, they are more likely to participate fully, express interest and creativity, concentrate on tasks, and consider their schoolwork important. Multiple studies have shown that settings with high levels of bullying reduce students' sense of psychological and physical safety, which consequently decrease emotional and cognitive engagement in school (Hinduja and Patchin 2013; Juvonen, Wang, & Espinoza, 2011). For instance, using a large quantitative sample of 6^{th}-10^{th} grade students. Jovenen and colleagues (2003) found bullying victims to have the high levels of behavioral and academic troubles as well as mental health issues. Similarly, Glew et al., 2008 found that students who were bullied had high rates of truancy, lower grade point averages, and were concerned about both physical and mental safety. Interestingly, Glew's study also found that

bullies were twice as likely to say they felt unsafe at school compared with non-bullies, (Glew et al 2008).

Engaged learning cannot occur when there is an imminent threat of violence. Settings that are free from intolerance, harassment, and bullying are simply more comfortable places to exist and learn. Ample empirical evidence has linked safety with engagement, and multiple recent studies have shown direct and indirect links between safety, other dimensions of school climate, and student emotional and cognitive engagement (Wang and Eccles 2010, 2013; Fredericks et al 2004).

CHAPTER 3

THEORY AND RESEARCH ON SCHOOL CLIMATE

The theory and research on student engagement links school-based effects with improved student performance in and out of school. These influential factors are embedded in a body of research on school climate. School climate, loosely defined as the "internal quality and character of school life" is a large determinant of a student's sense of having voice, feeling safe, and quality of teacher-student relations (Cohen et al., 2009). In this chapter, I review school climate theory and research, and the connections between quality school climates and high levels of student engagement.

Overview School Climate

School engagement theorists maintain that engagement is influenced by factors such as school discipline policies, peer relationships, support from teachers, curricular offerings, and choice and voice in school decisions (Appleton et al., 2008). Also known as school climate, these contextual factors directly affect each dimension of student engagement in school. School climate consists of dynamic internal factors that affect student and staff experiences within a school (Davis and Warner 2016). For example, school climate is thought to have significant consequences for the social, academic, and emotional well-being of all of the individuals within a school including teachers, support staff, and students (Cohen et al., 2009; Bryk and Schneider 2002). While the importance of school climate has been recognized for many years, dating back to Dewey (1916) and Durkheim (1956), it has recently regained attention for its potentially instrumental role in promoting the social and academic success of students (Dill 2007). Some of this attention stems from a realization that many macro-level factors such as socio-economic status, while highly related to engagement and achievement are too complex for schools to

control (Thapa et al., 2013; Davis and Warner 2016). School climate, while itself complex, is manageable. It can be adapted to influence students in spite of any external challenges they may face such as socio-economic status (NSCC 2016; Cohen 2009).

Scholars and practitioners view school climate as a product of school norms and behaviors, the relationships between all individuals (students, teachers, support staff) in the setting, teaching philosophy, and policies and procedures associated with school governance (Cohen et al., 2009; Thapa 2013; Bryk and Schneider 2002). According to the National School Climate Center, school climate consists of four general components: 1) active and relevant learning opportunities, 2) staff-student relationships, 3) safety and respect, 4) institutional environment (NSCC 2016). These school climate factors directly affect different dimensions of engagement in separate and dynamic ways (Wang and Eccles 2011, 2013).

Domain 1: Active and Relevant Learning Opportunities

The first domain of school climate includes the norms and values about how learning occurs and the processes in place to ensure a shared learning agenda (Thapa et al., 2013). In positive school climates, students and teachers actively participate in shaping their own curriculum or learning agenda. Effective approaches to teaching in these settings promote trust, respect, and cooperative learning. Positive school climates typically use pedagogy that connect the classroom to the real world, provide opportunities for students to explore relevant and important issues, allow students to form opinions, and give students a sense of ownership and choice about what they learn (Youniss et al., 2002; Morgan & Streb, 2001). Examples include social, emotional, ethical, civic learning, and service learning.

Domain 2: Staff-Student Relationships

Research indicates that positive school climates are characterized by students who feel supported by their peers and teachers in all aspects of their learning, and by teachers who feel empowered by the school administration and supported by their colleagues (Singh & Billingsley, 1998). This point about colleague support is important and frequently overlooked in discussions about school engagement. Engaging schools, with positive school climates, depend on teachers who are motivated and confident in their teaching, and believe they can positively affect students (Guo and Higgens-D'Allesandro 2011).

The nature and quality of the relationships between the individuals in a school setting is critically important for overall school climate (Davis and Warner 2016). Relationships are closely associated with emotional engagement, cognitive engagement, as well as a student's sense of safety at school, and perception of having a voice. For example, research has shown that relationships directly affect students and teachers sense of connection and attachment to the school (emotional engagement) (Blum, 2005; Whitlock 2006). Positive student-teacher relationships, characterized by clear communication, care, and trust, increase student motivation (cognitive engagement) (Noddings 2005; Conchas & Rodriguez, 2008; Bryk and Schneider 2002). Thus, student-teacher relationships have a strong influence on the other domains of school climate and for producing engaging outcomes.

Domain 3: Safety and Respect

A sense of safety plays a foundational role in engaging school climates. Safety includes physical safety, as well as socio-emotional safety. It is influenced by relationships, as well as the rules and norms in place to ensure that students and teachers feel safe to express themselves socially, emotionally, intellectually in an environment free of physical harm (Thapa et al., 2013).

Safe school environments have low levels bullying, social, and physical violence (Cohen 2006), and have consistent enforcement of rules that students and teachers perceive as fair (Gottfredson 2005). Safe schools tend to have low levels of student absenteeism and higher overall academic achievement scores (Astor, Guerra, & Van Acker, 2010).

School Climate Domain 4: Institutional Environment

The institutional environment refers to a school's physical layout, geographic surroundings, and the internal and external resources (supplies, financial support) available to support the school. The physical layout and availability of resources are associated with school connectedness. The size of a school, layout of a classroom, and schedule, for example, can shape the way students perceive safety, communications, and the nature and quality of relationships within a school (Astor et al., 2010). Additionally, schools that are supported by outside community resources may improve student perception of the importance of their schoolwork, and affect the breadth of learning opportunities available to students (Thapa et al., 2013).

School Climate & the Human Ecological Model

Engagement is influenced by macro-level and micro-level factors (Shernoff and Schmidt 2008). Reflecting Bronfenbrenner's human ecological model (1979), a student's engagement is influenced by systems and the individual's interactions and experiences in each overlapping system. At a macro level (Macro and Exosystem), a student's engagement will be influenced by national education policies, laws on the rights of a child, cultural norms, and economic forces. These larger systems are influential, but also remote. They are often unrecognized by the individual, and difficult to change. Meso and Micro systems, on the other hand, are comprised of recognizable contexts such as school, family life, and the human interactions that occur within

those contexts. These comparatively more proximate systems are highly influential on individuals, and can be adapted. Within these Meso-contexts interventions can be taken to affect student engagement (Thapa et al., 2013). Furthermore, conditions within these smaller systems will affect the larger systems as they are dynamically connected (Ma, Phelps, Lerner, & Lerner, 2009).

Drawing from this human-ecological framework, two general types of school improvement strategies have emerged: (1) ***externally-focused*** interventions that emphasize the school's relationship with families and community and (2) ***internally-focused*** interventions that emphasize school climate change. The first type of improvement strategy looks at the ways that schools can become more closely connected to the parents and the community. These models focus on parents, take advantage of the physical and social resources existing in the community to foster student learning. These outward-looking models recognize community as vitally important because many of the reasons behind student success are rooted in economic, family, and larger societal currents that are beyond the reach of schools to address alone (Epstein 2002; Mclaughlin 1987, 2000). In short, engaging the community can expand the resources available to schools, and tap into social capital to expand support for young people, in school and outside of school (Sanders 2002).

While these external focused strategies remain popular and effective approaches, recent research and theory on school engagement has turned toward micro-system interactions, emphasizing that school climate factors may have the greatest direct effect on a student's engagement (Cohen 2006, Blum 2005; Wang, Willett, and Eccles 2011).

School Climate – Facilitating Student Engagement

Many see adaptations to school climate as the most manageable way of promoting student engagement (Appleton 2006; Bundick 2014; Wang and Eccles 2015). Among the many effective strategies for managing school climate to maximize engagement, democratic education and place-based education (including personalized-learning, service-learning, project-based learning) stand out as the most frequently implemented and successful (Thapa et al., 2013). Each of these approaches influences all school climate domains, and creates a foundation for student engagement.

Democratic Schools

Democratic schools are characterized by shared decision-making among all school stakeholders, including faculty and students, parents, and community. In a democratic school, young people have power and freedom to organize their daily activities (AERO 2011). School policies and rules are established collectively, honoring youth input and voice in decision-making processes (Mintz 1994). Research suggests that democratic schools promote student agency, foster strong and respectful relationships between students and teachers, and establishes a sense of ownership and attachment to school (Mitra 2004, 2008; Blum 2005). When schools construct policies and procedures collectively, stakeholders in these settings understand operational procedures and are likely to comply with established rules (Finn and Rock 1997). As democratic governance implies purposeful and organized decisions among diverse individuals, the practice may also have the effect of building a sense of relational and social trust within the school (Flanagan and Stout 2010; Bryk and Schneider 2002). These organizational-level and individual-level outcomes associated with democratic governance in school settings are also well documented in out-of-school settings that emphasize shared control and youth voice in decision-

making (Blanchet-Cohen and Brunson 2014; Krauss et al 2014; Larson and Angus 2011). Despite evidence that democratic governance of schools, particularly the inclusion of youth voice in decision-making, positively affect all aspects of school climate, few schools fully implement the practice.

Place-Based, Project Based Curricula

Another effective strategy for building positive school climate to supports the emotional and cognitive engagement of students is place-based education. Place-based education refers to learning that connects the school with the larger community. It is frequently operationalized or termed service learning, community-based learning, and project based learning. Place-based education positions the community as a subject and context for learning, and as a resource (Powers 2004). Place-based education "tears down" the walls between the community and the school, providing opportunities for students to explore the places they live, apply knowledge to address community issues, and learn together with adults who are not typically involved in the classroom (Gruenewald and Smith 2014). From a practical perspective, the community, as a subject and context for learning can be defined in a variety of ways. Often, "community", references the people within a single school. The practice expands the traditional notion and boundaries of "education", by allowing young people to identify learning opportunities in every-day life. Research has attributed place-based learning increased perceptions of sense of community (Smith 2002), improved engagement and academic performance (Powers 2004; Gruenewald and Smith 2014), and propensity for civic engagement (Billig 2005; Gruenewald et al., 2014). From a theoretical perspective, Place-based learning is thought to contribute to a student's intrinsic motivation to learn as they see purpose and relevance in what they are learning (Wadsworth 1978; Powers 2004).

Considering the domains of school climate, place-based education is most directly linked with approaches to teaching and learning (domain 1) and institutional and community environment (domain 4). Through the process of place-based learning and action, there is also much potential for the practice to positively benefit school climate domain 2 (relationships) and domain 3 (safety and respect).

CHAPTER 4

CONCEPTUAL FRAMEWORK AND RESEARCH QUESTIONS

Youth-Adult Partnership is a theory and practice that encompasses and connects setting-level factors with outcomes for individuals. The theory embodies the key elements of the prominent school climate and school engagement research and theories mentioned in prior chapters. In this chapter, I describe the rationale for using Y-AP as the theoretical framework that guides this studies inquiry. I begin with a brief overview of prominent studies on school climate and engagement and discuss how Y-AP addresses gaps in that research. I discuss the instrumental components of Y-AP (voice and support) and hypothesize why these components should predict emotional and cognitive engagement.

A Rationale for Y-AP

The empirical grounding for this study is rooted in recent research examining the connection between school climate and student engagement in school. As discussed earlier, numerous qualitative and quantitative studies have documented the multi-dimensionality of the school engagement construct (Fredericks et al 2004; Jimmerson et al 2003; Appleton et al 2008); causal and correlational links between elements of school climate and engagement (Cohen 2014, Wang and Eccles 2010, 2012; Davis and Warner 2015); outcomes of engagement (Archambault et al., 2009; Fredericks et al 2004; Yassie-Mintz 2009); and school-based interventions that promote positive school climate (Cohen 2014, Wang et al., 2015).

While many of these studies focus on the dynamic relationships that exist between foundational components of school climate, none specifically examines youth voice as important mediator between climate domains and engagement outcomes. Rather, the focus of most studies centers on understanding the mediating role of school engagement / program engagement on

other outcomes such as academic achievement, civic competencies, and agency (Wang and Eccles 2010; Zeldin et al., 2014). For example, Wang and Eccles (2010, 2015) have completed longitudinal studies testing associations between one or more school climate factors, the influence on engagement, and consequently on longer-term outcomes such as improved grades or academic test scores. Another common approach is research aimed at understanding the direct impacts of factors that moderate engagement such as socio-economic status, gender and race/ethnicity (Vieno et al 2005; Davis and Warner 2015; Wang, Willett and Eccles 2011). Only a few studies have concentrated on examining how youth voice and supportive adult relationships are correlated (Rodriguez 2008; Serido et al 2011; Zeldin et al 2015, Mitra 2004, 2008). More specifically, empirical studies that have looked at Y-AP as an intervention (or even on the two dimensions of Y-AP) have most frequently looked at outcomes such as program engagement, connectedness, and empowerment within the context of community-based programs (Zeldin et al., 2015). While there is growing attention on how community-based positive youth development approaches, for example, may be applicable in school settings, research on Y-AP (both the theory and practice) in schools remains limited.

Youth-Adult Partnership

In practical terms, Youth-Adult Partnership involves a group of young people, working together on matters of shared importance (Camino 2000; Zeldin et al., 2013). Y-AP occurs in a variety of settings, including community-based organizations, governing boards, afterschool programs, schools, and classrooms. Rooted in the work of Dewey, Y-AP is a practice that aims to create the norms, values, and conditions for youth and adults to work together for organizational or community improvement (Zeldin et al., 2014). Importantly, Y-AP is not a program. Y-AP is a core design element for community and organization initiatives. When it is

implemented strategically, and with quality, it produces an array of positive youth development and setting-level outcomes (Zeldin et al., 2012). Y-AP is defined as:

> "The practice of (a) multiple youth and multiple adults deliberating and acting together (b) in a collective (democratic) fashion, (c) over a sustained period of time (d) through shared work (e) intended to promote social justice, strengthen an organization and/or to affirmatively address a community issues." (Zeldin et al., 2013).

Y-AP stands out among other interventions aimed toward positive youth development because it simultaneously transforms individuals as well as organizations. In fact, the starting place for most Y-AP driven projects is identifying an area of organizational or community improvement (Collura and Zeldin 2010). Through the process of working cross-generationally toward a common goal, Y-AP participants accrue individual benefits such as a sense of ownership and connectedness to a setting (Dawes and Larson 2011; Whitlock 2007), agency and strategic thinking (Larson and Angus 2011), and social and civic skills (Serido et al., 2011). The setting in which Y-AP occurs also accumulates benefits. For example, an organization (community program, school, etc) becomes more equitable and democratic in its daily functioning, consequently enabling the conditions for people to thrive as learners and collaborators in an environment in which they feel safe, cared for, and valued (Perkins et al., 2007; O'Donoghue and McLaughlin 2008). In short, Y-AP, when applied with quality, transforms a setting's climate/culture, and consequently the development of individuals within that setting.

At an individual level, Y-AP participation results in an array of Positive Youth Development (PYD) outcomes including the oft-referred to "Five C's" (Competence,

Confidence, Connection, Character, and Caring) that are foundational for success later in life (Lerner et al 2005). Y-AP is recognized as an effective strategy for sustained participation in community-based programming, as well as in schools and classrooms (Ross 2012; Mitra 2006; Rodriguez 2008). Multiple studies in community-based settings have shown that programs that offer opportunities for participants to have a voice in decision-making, take on leadership roles, engage in community life, and offer meaningful relationships with responsible adults, have engaging and empowering effects on participants (Zeldin et al., 2012). Youth are not the only beneficiaries. Research shows that adult Y-AP participants gain new perspective on community issues and become proponents of youth inclusivity (Larson and Angus 2011).

Instrumental Components of Y-AP: Youth Voice and Supportive Adults

The efficacy of Y-AP, as an organizational and individually transforming practice stems from the relationship between two components: youth voice in decision-making and supportive adult relationships (Zeldin et al., 2015; Mitra 2008; Blanchet-Cohen & Brunson 2012).

Youth Voice

The first component, youth voice, is characterized by a young person's ability to exert power and influence over their life. Structured and unstructured opportunities for youth voice is thought to enhance the intrinsic motivation and initiative necessary to become interested and engaged in a task, and consequently to the gaining mastery and confidence to complete that task (Larson 2000; Csikszentmihalyi 1990). This notion of intrinsic motivation is closely tied to self-determination theory (Skinner and Wellborn 1994) and expectancy value theory (Eccles 2007), two underlying foundations for emotional and cognitive engagement (Fredericks et al., 2004). When a young person is provided opportunities to express their voice regarding decisions that affect them (i.e school schedule, choice of classes), they are more likely to see value in their

education and consequently more invested in their own learning. In other words, voice is an essential ingredient of engagement.

Supportive Adults

The second instrumental dimension of Y-AP, supportive adult relationships is intertwined with youth voice. (Zeldin et al., 2015). Supportive adult relationships (adult support) are characterized by trusting, caring, relationships with adults who support young people emotionally and with practical guidance. Supportive adult relationships facilitate youth voice and have direct influences on a young person's motivation to learn / complete tasks, confidence in accomplishing goals, and attachment to a setting (Serido et al., 2011; Wang and Eccles 2013). Indirectly, the type and nature of adult support influences the sense of psychological safety experienced in a setting, pedagogical approach, and often the content of materials offered in schools and other settings (Hirsch 2005; Cohen 2014; Rodriguez 2008).

When operating together, voice and support may enhance a positive setting / atmosphere, and consequently the emotional and behavioral engagement within that setting (Rodriguez 2008; Serido et al., 2011; Cohen 2006). While it is most frequently adopted as a practice in non-school settings, Y-AP, with its emphasis on youth voice and support adult relationships as place and individual transforming practices, may be a highly effective school engagement intervention.

Conceptual Models

This study's conceptual framework draws from existing theory and research on school engagement, school climate, and Y-AP. I first tested a traditional school climate – school engagement model in which the three foundational domains of school climate have direct influences on cognitive and emotional engagement. Next, I examined the role of youth voice as a school-climate factor that influences engagement. The rationale for testing how youth voice is

associated with emotional and cognitive engagement is based on a notable absence of "student voice" in school climate / engagement literature, and on evidence suggesting that voice is mediator between supportive adults and other positive youth development outcomes (Serido et al., 2011; Rodriguez 2008). By identifying the relationship between voice and other contextual factors, the study provides insight into school improvement and intervention designs that might maximize engagement. By analyzing how recognized factors of school climate such as "feeling safe", "having voice", and "feeing supported" are associated with emotional engagement with school and consequently with cognitive engagement in school, this study will provide much needed insight to inform school policies and practices.

Figure 1: Traditional Conceptual Model

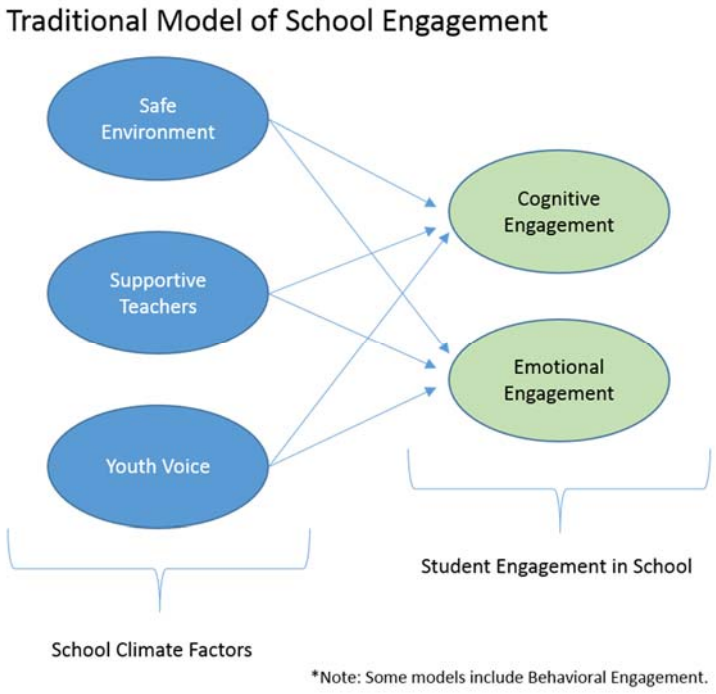
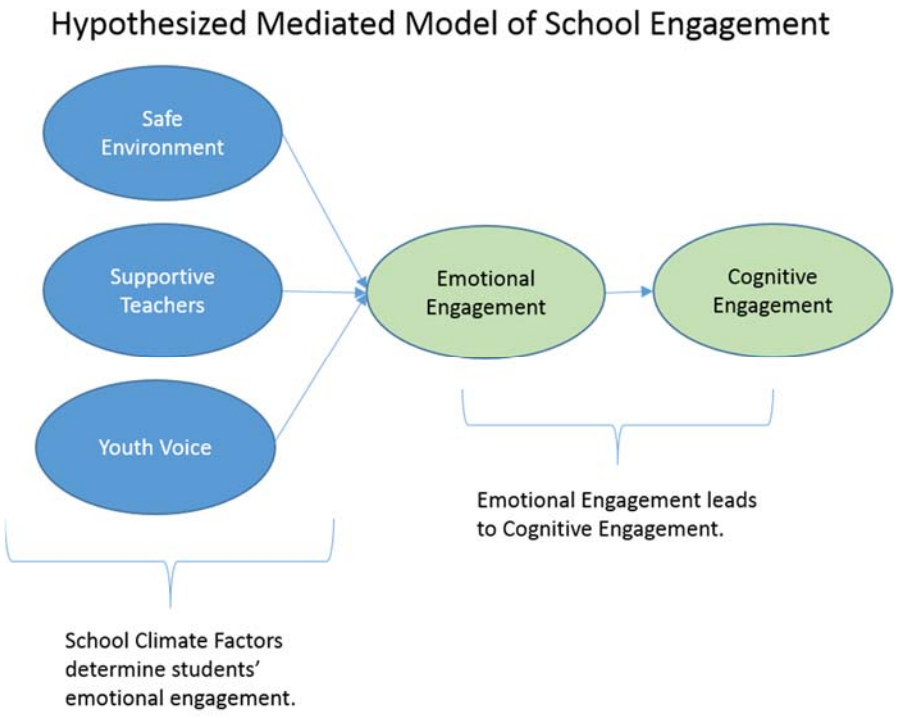


Figure 2: Hypothesized Model Promoting School Engagement



Research Questions

The study is guided by the following research questions:

- *Research Question 1:* To what extent do student perceptions of safety, teacher support, and voice in decision making affect their level of cognitive engagement?
- *Research Question 2*: To what extent do student perceptions of safety, teacher support, and voice in decision making affect their level of emotional engagement?
- *Research Question 3:* What are the pathways connecting student perception of safety, support, and voice to emotional and cognitive engagement?

CHAPTER 5

METHODOLOGY

This study builds on a growing body of research on school engagement by examining the relationships between students' perception of the contextual elements of their school environment (peer support, adult support, safety, youth voice) with their cognitive and emotional engagement at school. The study responds to a call from school engagement scholars for research examining predicative indicators and "influential facilitators across relational contexts over time" (Appleton 2008, Eccles 2011). The study also responds to a need for clarity and evidence regarding the multi-dimensional nature of the school engagement construct. Finally, the study is designed to test how Y-AP, specifically the interaction between Y-AP dimensions of supportive adult relationships and youth voice in decision-making relate to student engagement in school and how the practice might be applied in a school context to maximize engagement.

Research Questions

The study addressed the following research questions:

- *Research Question 1:* To what extent do student perceptions of safety, teacher support, and voice in decision making affect their level of cognitive engagement?
- *Research Question 2*: To what extent do student perceptions of safety, teacher support, and voice in decision making affect their level of emotional engagement?
- *Research Question 3:* What are the pathways connecting student perception of safety, support, and voice to emotional and cognitive engagement?

  3a: Does youth voice mediate the relationship between teacher support and cognitive engagement?

3b: Does youth voice mediate the relationship between teacher support and emotional engagement?

3c: Does emotional engagement mediate safety, voice, and teacher support?

3d: Do these pathways function in similar ways across settings?

Using cross-sectional survey data collected in three distinct school settings, this study used multiple regression to answer these questions. This chapter describes the dataset, sample, variables and measures, outlines the specific analysis procedures, and provides the rationale for this proposed approach.

Procedures

Data Collection

The data for this study were collected between 2012 and 2014 in three distinct school settings: 1) traditional high schools, 2) alternative high school programs, 3) a democratic, place and project-based, community school. In each setting, students completed the Youth and Community Survey (YAC survey) multiple times at 4 to 6-month intervals. Faculty and graduate students at the University of Wisconsin School of Human Ecology designed the YAC survey with the purpose of examining how a young person's experiences in school, afterschool, and community contexts influence psycho-social development and civic inclinations. The survey consists of 22 validated latent variables, many of which have shown reliability and validly in previous studies of young people (i.e. Zeldin et al 2014, Peterson et al 2011). Five of these variables, Safe School Environment, Supportive Adults, Youth Voice, Emotional School Engagement, and Cognitive School Engagement are most relevant to the research questions outlined above. This study analyzes cross-sectional data from this greater longitudinal data set, using a single time point from each student (time point 2),

Participant confidentiality and overall protection of human subjects were emphasized at all points in the data collection process. Participants were required to obtain parental consent, and provided individual assent to participate at each survey time-point. Prior to survey administration, a member of the research team explained the purpose of the survey and offered students an opportunity to opt-out. Research team members were available to assist students complete the survey and to answer any student questions. The study received University of Wisconsin Institutional Review Board approval in 2010, as well as continuing review in 2012 and 2015. The Clark Street School sample had additional IRB approval from the University of Wisconsin Extension (2012). All research team members were required to complete human subjects training. The research team met on a monthly basis to review data collection and data entry protocols. In 2015, the study successfully completed a post-approval monitoring process and was commended for attention to all details outlined in the IRB.

The YAC survey items used in this study as well as all IRB related documents including study consent and assent forms can be found in APPENDIX A.

Study Sites

Data was collected in three distinct types of school environments. These types of schools differ in many ways, including fundamental educational philosophy, approach to teaching, classroom management, school policies and procedures, and student demographics. By incorporating a variety of school types in the analysis, this study sought to understand the common (shared) paths to student success and identify school-based practices (policies, norms, etc.) that may trend toward higher levels of students' cognitive and emotional engagement in school.

SiteType 1: Clark Street Community School - Place-Based, Democratic School

Clark Street Community School (CSCS) was purposefully selected for this study for several reasons. First, the school began operations in 2012 with a mission of reimagining how a school operates to maximize student engagement. The school's operating philosophy emphasizes *democratic education*, a philosophy that entails authentic youth voice in school decision-making and partnership among youth and adults. Because the majority of public schools in the United States do not emphasize youth voice, Clark Street's philosophy make it an ideal laboratory for learning how youth voice functions with other elements of school culture to promote student engagement in school. Second, the school emphasizes *place and project based education*, a strategy that implies an ecological model for building functional school-communities. Place-based education is associated with positive school climate as the approach permits students to explore issues of personal interest, allows students to make connections between academics and real life issues, and promotes a deep understanding and sense of community (Gruenewald and Smith 2014). Research suggest that students participating in place-based education become invested in a place, develop collegial and respectful relationships with diverse peers and adults, and recognize value and relevance of education (Smith 2002; Powers 2004). Third, the school identifies itself as a *community school*. This third pillar of CSCS operations includes external (outward-looking) and internal (inward-looking) community engagement strategies. At the external level, the school intentionally engages parents and the larger community in school decisions, curriculum, and general operations. At the internal level, CSCS takes intentional actions to build a sense of trust and co-learning among teachers and students, and promotes an atmosphere of peer supported learning. Students are afforded multiple opportunities to express their voice within the school. For example, students are encouraged to participate in multiple

areas of school decision-making including curriculum development and school policies and procedures. While such equality between youth and adults may not exist outside of the school walls, within the school there is an overall shared purpose, a sense of physical and psycho-social safety, and mutual accountability. By building community within the school, everyone there is (theoretically) invested in learning. As each of these factors are not typically an intentional focus in traditional schools, the Clark Street sample may offer an idealized model of Youth-Adult Partnership in schools.

Finally, Clark Street's student population consists of a diverse group of students, many who, in the absence of this non-traditional school, would not attend school at all. As such, this sub-sample is ideal for understanding school environmental / cultural factors that, not only lead to school attendance, but to investment, interest, and connection to school. Similarly, this subsample is useful for understanding associations and mediating relationships among school environmental factors and engagement as they have multiple opportunities to express their voice, are engaged in peer-supported learning, and supported by adults (In ways that are intentionally collaborative, challenging, and empowering) compared with peers in more traditional school environments. At CSCS, students are met "where they are," and held accountable for their own learning with guidance as appropriate.

Site Type 2: Traditional Public High Schools

Students in the 9^{th}-12^{th} grades at three public high schools were invited to participate in the study. These schools can be characterized as "traditional" for several reasons. Notably, they have a large student population (1500 – 2000 students) with large classroom sizes (30 students). The school district, state department of public instruction, and US department of education mandate much of the curriculum. While there is choice in what students may choose to learn,

their "personalized pathways" may be limited by what is permitted by school district and state education policy. In the traditional setting, some youth may be encouraged and actively participate in school decision-making (especially within individual classrooms, or via student clubs, student council, etc.), but it may not be the norm. These traditional schools are the type of attended by most American teens. For that reason, this sub-sample is critically important to the proposed study as it serves as a proxy measure of the experience of an average student in a "normal" school.

Site Type 3: Alternative Public High Schools

The sample includes students attending the School District's "Alternative and Innovative Education" programs. These programs (eight of them), are attended by students who are not succeeding (not engaged) in traditional schools. These include students who are credit-deficient, chronically absent, have been suspended or expelled (at one point) for disciplinary reasons, or are affected by a variety of structural barriers attributed to race and socio-economic status. Alternative school students participating in this study attended a variety of types of programs, ranging from work-based and service-learning to night school and programs for subsets of youth such as pregnant teens). In many ways, these students have a great deal of choice in the alternative program they choose to attend. Within many of these programs, students have much autonomy over their choice of classes, flexibility in their schedule, and opportunities to gain school credit for work outside of the school walls. Because of the high level of adult support and youth voice that is implied in these alternative school models, the inclusion of alternative school students in the study may provide evidence that voice and support are critical predictors of school engagement.

Sample

Data collection began in August 2012 and concluded in May 2015. All students attending CSCS were invited to participate in the survey. Consistent with IRB protocols, parental consent forms were mailed to students' parents; those students with consent were added to a participant roster, and assigned a unique identifier. Students were read a script about the risks associated with the study provided written assent to participate prior to completing each survey. Students voluntarily participated in the study. In the alternative and traditional school settings, participants were recruited from classrooms that were part of a youth empowerment and sexual health curriculum known as the Madison Empowering Responsibility in Teens Program (MERIT). In alternative school settings, 100% of the student body were MERIT participants; in traditional high schools, MERIT participation was mostly random – with any student enrolled in a health class participating in the MERIT program.

In total, 603 high school students completed the at least survey one time. Students with missing data on the variables of interest for this study were removed from the dataset (list-wise deletion), resulting in a cross-sectional sample of 513 high school students. The overall response rate among all participants was 71%.

Sample Descriptive

The sample consists 513 high school students. 188 students (37%) attended traditional high schools, 186 (36%) alternative high schools, and 139 (27%) of the students attended Clark Street School. The sample had a near-equal gender distribution with 48% males, 52% females. Grade in school was used as a proxy for age. 21% of participants were 9th grade students, 26% 10th graders, 32% 11th graders, and 21% were 12th grade students. Forty-two (42%) percent of the

sample identified their race/ethnicity as black, 35% as white, 13% Hispanic, and 10% reported another race.

These sociodemographic characteristics were similar within each type of school setting, with the exception of Clark Street School having a notably high population of students identifying themselves as white. Table 2, below, presents sociodemographic characteristics of the sample.

Table 1: Demographic Characteristics of the Sample

Demographics by School Type (N=513)

	Traditional High School N=188		***Alternative High School N=186***		***Clark Street N=139***		***Full Sample N = 513***	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Gender								
Male	93	49%	86	46%	66	47%	245	48%
Female	95	51%	100	54%	73	53%	268	52%
Race								
White	34	18%	45	24%	101	73%	180	35%
Black	116	62%	82	44%	16	11%	214	42%
Hispanic	20	11%	35	19%	14	10%	69	13%
Other Race	18	9%	24	13%	8	6%	50	10%
Grade								
9th grade	44	23%	27	15%	37	27%	108	21%
10th grade	69	37%	38	20%	27	19%	134	26%
11th grade	42	22%	74	40%	49	35%	165	32%
12th grade	33	18%	47	25%	26	19%	106	21%
Economic								
Free Lunch	148	79%	146	78%	50	35%	344	67%

Measures

To assess the relationships between school-based environmental factors and student engagement in school, the study included the following variables:

Outcome Measures

Student engagement in school (used interchangeably with the term "school engagement") is recognized as a multidimensional construct consisting of cognitive, emotional, behavioral components (Fredericks, Blumenfield & Paris 2004). Recent studies have employed a multitude of scales to capture the multidimensional character of school engagement (Appleton, Chirstenson, & Furlong, 2008; Fredricks, Blumenfeld, & Paris, 2004; Libbey, 2004). For the purposes of this study, school engagement is conceptualized as having a cognitive dimension and an emotional dimension.

Cognitive Engagement in School: Cognitive engagement is defined as a student's enjoyment, interest, and personal investment in their schoolwork (Greene, Miller, Crowson, Duke, Akey, 2004). Cognitively engaged students are psychologically motivated to learn. Generally speaking, cognitive engagement captures the notion that a student is "into" their schoolwork. Students who are cognitively engaged in school consider schoolwork as important and meaningful to their future success. Students with high levels of cognitive engagement feel a sense of purpose and satisfaction in their studies. The current study assesses cognitive engagement using an adaptation of Cochran, Wood & Arnekley's (1994) School Engagement scale. Five statements ("Going to school is enjoyable," "Doing well in school is important for getting a good job," "My classes at school are interesting," "The things I am learning in school are important for later in life," "My school work is important to my life") were rated using a 5-point Likert-type scale from *strongly disagree* to *strongly agree*. Composite scores were

calculated from the five items to generate an overall mean score for the measure. (Mean 3.75, SD .78, α=.80)

Emotional School Engagement: Emotional engagement is a student's sense of connection and belonging to their school. Emotionally engaged students feel a sense of safety, respect, and pride in their school (Fredericks et al 2004). Emotional engagement was assessed using McNeely, Nonnemaker and Blum's (2002) school connectedness scale. Five statements ("I feel close to people at my school," "I feel I am a part of my school," "I am happy to be at my school," "The teachers at my school treat students fairly," "I feel safe in my school") were rated using a 5-point Likert-type scale from *strongly disagree* to *strongly agree*. A composite score was calculated from the five items to generate an overall mean score of emotional engagement. (Mean 3.40, SD .88, α=.83).

Predictor Measures (Contextual, Environmental, Climate/cultural dimensions)

Based on prior literature, personal observation, and informal conversations with students in the study settings, the proposed study will include three independent predictor variables: *Safe Learning Environment, Supportive Adults, and Youth Voice*. These predictor variables represent elements of school climate and culture that schools may be able to adapt through policies, procedures, and practices. More importantly, the *Supportive Adu*lts and *Youth Voice* variables represent the two dimensions of Youth-Adult Partnership, the theoretical foundation of this study.

Safe Learning Environment: Students' sense of safety at school was assessed using four items adapted from the Youth and Adult Leaders for Program Excellence (YALPE) assessment tool (Camino, Zeldin, Mook & O'Connor 2004). Respondents rated five statements ("I feel safe when I'm in this school," "This school makes me feel welcome," "Bullying and aggression are

not tolerated here," "All the people in this school treat me with respect," using a five-point Likert-type scale from *strongly disagree* to *strongly agree*. (Mean 3.66, SD .85, α=.84).

Supportive Adult Relationships: As one of the two dimensions of Youth-Adult Partnership, the measure of supportive adult relationships is designed to capture the mutually supportive relationships that exist between school staff (teachers) and students. Previous qualitative and quantitative studies suggest that these relationships have a significant direct effect on a student's cognitive and emotional engagement in school (Wang and Eccles 2011; Archambault 2009), as well as in engagement in tasks in other settings such as afterschool programs (Krauss et al., 2014). Supportive adult relationships were measured using five items adapted from YALPE (Camino et al 2004). The recently validated scale (Zeldin et al., 2015), is based on student ratings of five items ("In this school, It is clear that students and teachers respect each other," "Teachers learn a lot from students in this school," "There is a good balance of power between students and teachers in this school," "Students and teachers trust each other in this school," "Students and teachers learn a lot from working together in this school") using a 5-point Likert-type scale from *strongly disagree* to *strongly agree*. Again, a composite score is generated from the overall mean of these five items. (Mean 3.47, SD .87, α=.90)

Youth Voice in Decision Making: As the second dimension of Youth-Adult Partnership, this measure is designed to assess the degree to which students perceive that their voice/opinion matters and how they experience opportunities to participate in decision-making at school. Youth voice was assessed using Zeldin's (2015) validated scale. Students rated four statements ("I have a say in planning programs at this school," "In this school, I am encouraged to express my ideas and opinions," "I am expected to voice my concerns when I have them," "Teachers take my

ideas seriously") using a five point Likert-type scale from *strongly disagree* to *strongly agree*. (Mean 3.53, SD .88, α=.87).

Sociodemographic Control Variables

Socio-demographic variables such as race, gender, age, socio-economic status have long been associated with a variety of psycho-social outcomes including academic achievement (Diemer et al., 2013). For many years, dating to back to the Coleman Report (Coleman et al., 1966), there has been a debate regarding the relative effects of outside school factors versus school effects associated with achievement and other outcomes (Davis and Warner 2015). Recent studies examining the effects of organizational climate and quality in school and non-school settings suggest that school (setting-level) effects may outweigh effects associated with outside socialization contexts such as family composition and income (Hoy et al., 2006; Krauss et al., 2014). Considering this existing research and because a primary aim of this study is to understand school climate effects, the study included the following self-reported demographic predictors as covariates / controls in the analyses:

Gender: Males are coded as "1" and females as "2". Female was used as the reference category in all analyses.

Race: Student race includes four categories: White, Black, Hispanic/Latino, and Other Race. Due to small sample size, "Other" includes Asian, Native American, and Multi-racial. Racial categories were dummy-coded for use in the analysis. Other race was used as the reference category in each analysis.

Grade in School: Student's year in school (9^{th}, 10^{th}, 11^{th}, and 12^{th} grade) are dummy-coded. The 9^{th} grade category was used as the reference in each analysis.

School Type: The type of school a student attends (alternative high school, traditional high school, and Clark Street school) was included in the analyses to understand how school context (rules, procedures, policies) might affect cognitive and emotional school engagement. A school type variable was dummy-coded and the traditional high school category was used as a reference category.

Socio-Economic Status: Student's self-reported participation in free and reduced lunch programs is included as a proxy for socio-economic status. As an "absolute" measure based on Federal Poverty Levels, free lunch status can be useful for estimating aggregate school poverty, but may not provide more nuanced understanding of relative poverty experienced by individuals (Diemer et al., 2013). Despite this limitation, free and reduced lunch is commonly used in school-based studies and offers a general insight into potential effects of poverty on outcome variables. In this study, students receiving free lunch are coded as "1". Students not receiving assistance are coded as "0" and serve as a reference category.

Latent Construct and Variable information:

Information regarding the predictor and outcome variables, including interclass correlations, alphas, means and standard deviations are presented in Table 2:

Table 2

Means, Standard Deviations, and Intercorrelations Among All Latent Variables (N= 513)

	1	2	3	4	5
1. Safe Learning Environment	1				
2. Supportive Adults	0.73*	1			
3. Youth Voice	0.66*	0.75*	1		
4. Cognitive School Engagement	0.46*	0.47*	0.46*	1	
5. Emotional School Engagement	0.67*	0.61*	0.58*	0.59*	1
Mean	3.66	3.47	3.53	3.75	3.40
Standard Deviation	0.85	0.87	0.88	0.78	0.88
Internal Consistency (α)	0.84	0.90	0.87	0.80	0.83

* All coefficients are significant at ($p<.01$).

**Used Variance Inflation Factor (VIF) to check for collinearity. There were no violations, with VIFs within established bounds.

Data Analysis

Data Cleaning

As an initial step, all data were cleaned following the recommendations of Morrow and Skolits (2012). Data cleaning, and all subsequent analyses were conducted using STATA 14.1 (StataCorp 2015). Cleaning included the following steps: (1) Analysis of frequencies was used to identify coding errors; (2) composite variables were generated for variables of interest to this study (School Engagement, School Connectedness, Peer Support, Safe Learning Environment, Youth Voice, Supportive Adult Relationships); (3) reliability of all scales was calculated using Cronbach's Alpha; (4) Covariates and Demographic variables were modified and recoded into Dummy variables; (5) Checks for normality, outliers, heteroscedasticity and multicollinearity were completed following the guidance of Gordan (2010). Multicollinearity was assessed using

Variance Inflation Factors (VIF) for all independent and dependent variables. No violations of these assumptions were recorded.

Multiple Regression

Ordinary Least Squares (OLS) Multiple Regression was used to answer the study's three primary research questions. A preliminary power analysis was used to determine whether the sample size was sufficient for the analysis. Generally speaking, desired sample sizes for multi-level regression should have a minimum of 5 observations per parameter included the models (Bentler and Chou 1987), but 10 observations per parameter is recommended (Kenny 2015). Using the G*Power statistical package with an alpha of .05, power of .95, and medium effect size (f=.15) it was determined that a minimum sample size of 98 would be required for the analysis. The current sample of 513 observations exceeds this threshold, and is sufficient power for multiple regression with 14 predictors.

Three sets of linear regressions were run to test the following hypotheses:

Set 1: Predictors of Cognitive School Engagement

- Hypothesis 1: Safety will be positively correlated with cognitive engagement.
- Hypothesis 2: Teacher support will be positively correlated with cognitive engagement.
- Hypothesis 3: Voice will be positively correlated with cognitive engagement.
- Hypothesis 4: Voice will be the strongest predictor of cognitive engagement.

Set 2: Predictors of Emotional School Engagement

- Hypothesis 5: Safety will be positively correlated with emotional engagement.
- Hypothesis 6: Teacher support will be positively correlated with emotional engagement.
- Hypothesis 7: Voice will be positively correlated with emotional engagement.

Set 3: Mediated Models

- Hypothesis 8: Voice will mediate the relationship between teacher support and cognitive engagement
- Hypothesis 9: Voice will mediate the relationship between teacher support and emotional engagement.
- Hypothesis 10: Emotional engagement will mediate the relationship between safety, support, voice, and cognitive engagement (full path). Compared with all other models, the full model will have the best fit.

Cognitive School Engagement

A three step multiple regression was used to answer research question 1: *How do student perceptions of safety, teacher support, and voice in decision making affect their level of cognitive school engagement*?

The cognitive school engagement analysis assessed the following models:

Cognitive Model 1 (Cognitive engagement predicted by safe school environment)

$$Y_{Cognitive\ School\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \varepsilon$$

Cognitive Model 2 (Cognitive engagement predicted by safe environment and supportive adults)

$$Y_{Cognitive\ School\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \beta_{12} X_{Supportive\ Adults} + \varepsilon$$

Cognitive Model 3 (Cognitive engagement predicted by safe environment, supportive adults, and youth voice)

$$Y_{Cognitive\ School\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \beta_{12} X_{Supportive\ Adults} + \beta_{12} X_{Youth\ voice} + \varepsilon$$

Emotional School Engagement

A similar three step multiple regression was used to answer research question 2: *How do student perceptions of safety, teacher support, and voice in decision making affect their level of emotional school engagement?* The emotional school engagement analysis assessed the following models.

Emotional Model 1 (Emotional engagement predicted by safe school environment)

$$Y_{Emotional\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \varepsilon$$

Emotional Model 2 (Emotional engagement predicted by safe environment and supportive adults)

$$Y_{Emotional\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \beta_{12} X_{Supportive\ Adults} + \varepsilon$$

Emotional Model 3 (Emotional engagement predicted by safe environment, supportive adults, and youth voice)

$$Y_{Emotional\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \beta_{12} X_{Supportive\ Adults} + \beta_{12} X_{Youth\ voice} + \varepsilon$$

Full Model

The full model assessed the extent to which cognitive school engagement was predicted by safe school environment, supportive adults, youth voice, and emotional engagement. This model was used as a first step answering research question 3: *What is the ideal pathway connecting student perception of safety, support, and voice to emotional and cognitive engagement?*

$$Y_{Cognitive\ School\ Engagement} = \beta_0 + \beta_1 X_{Safe\ Environment} + \beta_2 X_{Black} + \beta_3 X_{White} + \beta_4 X_{Hispanic} + \beta_5 X_{Male} + \beta_6 X_{Grade\ 10} + \beta_7 X_{Grade\ 11} + \beta_8 X_{Grade\ 12} + \beta_9 X_{Free\ Lunch} + \beta_{10} X_{Clark\ Street} + \beta_{11} X_{Alternative\ School} + \beta_{12} X_{Supportive\ Adults} + \beta_{12} X_{Youth\ voice} + \beta_{12} X_{Emotional\ Engagement} + \varepsilon$$

Overall model fit of each aforementioned model was assessed using model F-tests, Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC) and R-squared comparisons. Preferred model fit is indicated by smaller absolute values of AIC and BIC (Gordan 2010).

Testing for Mediation / Path Analysis

Tests for mediation were conducted using Barron and Kenny's (1986) four step process: (1) verify that the causal variable has a significant association with the outcome, (2) verify that the causal variable is significantly associated with the mediating variable, (3) verify that the mediator affects the outcome variable, and (4) calculate the effect of the causal variable on the outcome controlling for the mediator to understand the extent of mediation (full or partial). The significance of mediation was tested using Sobel's test (1982). Direct, indirect, and total effects of each variable were used to calculate the proportion of mediated effects of each variable. The final results are presented as a path diagram showing standardized beta coefficients for each path.

Post-Hoc tests for moderating effects of sociodemographic variables

The primary aim of this study was understanding the extent that school climate factors are associated with engagement, with the intent of identifying potential strategies for schools to maximize the engagement of their students regardless of socio-demographic background. That is, the study sought to identify empirically based practical interventions schools could make to promote student engagement. As previously mentioned, this goal was rooted in the assertion that positive / quality school climates can mitigate any sociodemographic effects and the notion that studies with school reform implications should emphasize factors that educators can control and change (Budick et al., 2014; Appleton 2008).

That said, the diversity of this study's sample offered a unique opportunity to test effects of students' sociodemographic characteristics on levels of school engagement relative to school-based (climate) effects. Prior studies on school engagement have found that while both outside-school factors and inside-school factors both predict school engagement, academic achievement, and an array of positive youth development outcomes, the variables associated with in-school climate effects are stronger predictors (explaining more variance) in outcomes that socio-demographic factors (Hoy et al., 2006; Davis and Warner 2015; Wang, Willett & Eccles 2011). Such studies point to the importance of quality school climates for bolstering engagement and related positive outcomes. Several studies have identified notable age, gender and race differences (Johnson 2001; Wang et al, 2011) leading researchers to call for studies to further investigate race and gender-based differences on the behavioral, cognitive, and emotional engagement of students.

This study anticipated finding similar results. Partial F-tests and Linear Combinations were used to assess any effects that could be attributed to a student's grade in school, gender, economic status, race, and type of school.

CHAPTER 6

RESULTS

The primary purpose of this study was to assess the association of three foundational elements of quality school climates (safety, supportive adults, and youth voice) with a student's emotional and cognitive engagement at school. This chapter presents the findings from the quantitative analysis. First, I present descriptive findings and notable differences between students on variables associated with school climate and school engagement outcomes. Second, I describe the results of the multiple regressions that were conducted to test the association between school climate variables with cognitive school engagement and emotional school engagement respectively. Finally, I present results of mediation tests.

Descriptive Statistics, Assumption Testing, Regression Diagnostics

A series of statistical tests were used to assess relationships among variables, and to ensure that there were no violations of the assumptions of normality, linearity, homogeneity of variances, correlations among independent variables. Initial regression diagnostics were conducted following the recommendations of Gordan (2010) and UCLA's Statistical Consulting Group (2015). First, normality of the distribution of key variables was assessed by analyzing histograms, box-plots, and q-q plots. No violations of normality were recorded. Plot analysis also showed no significant outliers. Following each regression, Variance Inflation Factor (VIF) was calculated to identify potential multicollinearity, using the rule of thumb that VIF values greater than 10 are within bounds. No violations of these assumptions were recorded.

Mean Comparisons for Key Variables

Analysis of Variance (ANOVAs) were conducted to establish a preliminary understanding of any socio-demographic differences between participants on predictor and outcome variables.

School-based differences in school climate and engagement variables.

The analysis detected several mean score differences between students attending the three types of schools. One-way ANOVAs showed statistically significant differences in students' reported emotional school engagement between schools ($F(2,510) = 12.56$, $p<.001$). Post hoc Tukey Honest Significant Differences (HSD) tests showed significantly different scores between Clark Street students and their peers attending traditional high schools (+.48 mean difference (*d*), p=.000) and alternative schools (*d*=.28, p=.009). Clark Street students also had significantly higher levels of youth voice in decision making (*d*=.53, p=.000) and felt greater support from teachers (*d* =.25, p=.02) compared with students in traditional school settings. Similarly, alternative school students had significantly greater scores than traditional students. Full ANOVA results for each of the study variables and school type are presented in Table 3.

Despite these school-based differences, a student's sense of safety in their respective school environment and their level of cognitive engagement were statistically similar. While, on the surface, an absence of difference may seem to suggest that school climate doesn't matter for cognitive engagement, it is remarkable that the students attending CSCS and Alternative Schools were similarly engaged in school compared with traditional students, as the majority of these students were previously ***disengaged*** in traditional school settings. In this way, the statistically insignificant finding is significant in practical, pragmatic ways.

Table 3:

Mean Differences for Key Variables by School Type

Variable	School Type			F (2,510)
	Traditional School	Alternative School	Clark Street School	
Safe Learning Environment	3.55 (.95)	3.71 (.78)	3.75 (.81)	2.5
Supportive Adults	3.32 *CA (.93)	3.56 *TC (.80)	3.57 *T (.87)	4.76**
Youth Voice	3.34 ***C (.94)	3.49 ***C (.78)	3.87 ***TA (.83)	15.66***
Cognitive School Engagement	3.72 (.78)	3.72 (.85)	3.81 (.69)	0.683
Emotional School Engagement	3.20 ***C (.93)	3.40**C (.86)	3.68 ***T **A (.75)	12.56***

*p<.05, **p<.01, ***p<.001; Standard Deviation in Parentheses; Comparisons determined using Tukey HSD; C=Clark Street, A=Alternative, T=Traditional

Race-Based Differences on Key Variables

Each of the school climate variables and the outcome variables were examined for any differences based on a student's race. Using race as a factor variable, ANOVA's showed statistically significant differences in the mean scores for youth voice ($F(3,509) = 5.24$, $p<.01$) and emotional school engagement ($F(3,509) = 5.49$, $p<.01$). Specifically, students who identified themselves as white had higher youth voice scores (+.42, p=.01) versus students reporting "other" as race, and (+.39, p.007) compared with Hispanic students. Overall, white students also reported being more emotionally attached to their school compared with students of "other" races. This suggests that race may be a factor in how students experience their school climate and in their level of emotional engagement at school. However, given the large percentage of

CSCS students who reported "white" as race, combined with the already elevated engagement and voice scores in that setting, there may be a "Clark Street factor" influencing these results. In subsequent sections reporting the results of multiple regression examine this factor further. There were no significant differences between racial categories for a student's sense of safety at school, support from teachers, or cognitive school engagement. Full ANOVA results for race are described in Table 4.

Table 4:

Mean Differences for Key Variables by Race

Variable	Race				F (3,509)
	Black	White	Hispanic	Other	
Safe Learning Environment	3.70 (.86)	3.69 (.83)	3.57 (.89)	3.52 (.89)	0.949
Supportive Adults	3.51 (.87)	3.51 (.84)	3.40 (.80)	3.30 (1.1)	1.00
Youth Voice	3.52 (.87)	3.71*^{OH} (.80)	3.31*^{W} (.89)	3.29*^{W} (1.1)	5.24**
Cognitive School Engagement	3.83 (.73)	3.75 (.77)	3.62 (.88)	3.54 (.90)	2.54
Emotional School Engagement	3.36 (.87)	3.57*^{O} (.81)	3.35 (.88)	3.04*^{W} (1.1)	5.49**

*p<.05, **p<.01, ***p<.001; Standard Deviation in Parentheses
Comparisons determined using Tukey HSD; O=other, W=white, H=Hispanic,

Gender-Based Differences

Table 5 outlines the results of t-tests used to assess differences in key variable scores for male and female students. Male and female students had similar scores for emotional school engagement, safety, and support from teachers. There were nearly significant differences between genders for youth voice (t=1.79, p=.07) and statistically significant differences for

cognitive engagement scores (t=2.85, p=.004). Overall, male students were less cognitively engaged in school.

Table 5:

Mean Differences for Key Variables by Gender

Variable	Gender		t (df=511)
	Male	Female	
Safe Learning Environment	3.63 (.89)	3.69 (.83)	0.69
Supportive Adults	3.44 (.87)	3.51 (.88)	0.93
Youth Voice	3.46 (.91)	3.60 (.85)	1.79
Cognitive School Engagement	3.64 (.82)	3.84 (.74)	2.85**
Emotional School Engagement	3.44 (.86)	3.37 (.89)	0.99

*p<.05, **p<.01, ***p<.001; Standard Deviation in Parentheses

Economic-Based Differences

T-tests were used to identify any differences in the mean scores for each variable between students who received free or reduced lunch, and those without economic assistance. Students receiving free lunch (lower-income students) had significantly lower scores for youth voice compared with their peers (t=3.02, p<.01). This suggests that higher income students feel a higher degree of involvement in school decision making and opportunities to express their voice. However, these differences may also be a result of a "Clark Street factor", where fewer students

reported free lunch program participation. Results from regression analysis presented in a subsequent section offer further insight into this finding.

Table 6:

Mean Differences for Key Variables by Economic Status

Variable	Free Lunch Status		t (df = 511)
	Free Lunch	No Free Lunch	
Safe Learning Environment	3.65 (.89)	3.69 (.77)	0.56
Supportive Adults	3.48 (.89)	3.45 (.85)	0.34
Youth Voice	3.45 (.88)	3.70 (.87)	3.02**
Cognitive School Engagement	3.77 (.81)	3.70 (.73)	0.9
Emotional School Engagement	3.36 (.91)	3.49 (.81)	1.67

*p<.05, **p<.01, ***p<.001; Standard Deviation in Parentheses

Age / Grade-level Differences

ANOVAs were used to test any mean differences between age groups. No significant differences were found. Despite the lack of statistically significant age differences, there is a notable decline in students' cognitive and emotional engagement as they move from 9th to 12th grade. This decline is consistent with previous studies showing that disengagement increases with age (Corso et al., 2013). Table 7 also shows declines in students' perceived level of support from their teachers as they progress through high school.

Table 7:

Mean Differences for Key Indicators by Grade

Variable	Grade Level				F (3, 509)
	9th	10th	11th	12th	
Safe Learning Environment	3.72 (.82)	3.62 (.90)	3.67 (.89)	3.63 (.77)	0.355
Supportive Adults	3.58 (.85)	3.47 (.87)	3.49 (.93)	3.35 (.81)	1.31
Youth Voice	3.57 (.77)	3.50 (.89)	3.53 (.93)	3.54 (.91)	0.16
Cognitive School Engagement	3.87 (.76)	3.71 (.85)	3.74 (.78)	3.67 (.74)	1.36
Emotional School Engagement	3.54 (.92)	3.37 (.93)	3.39 (.84)	3.32 (.81)	1.28

*p<.05, **p<.01, ***p<.001; Standard Deviation in Parentheses; Comparisons determined using Tukey HSD

Multiple Regressions

A series of ordinary least squares (OLS) regression analyses were used to test the association between cognitive school engagement, emotional school engagement, with the school climate factors: safe learning environment, supportive adults, and youth voice. Race, gender, grade in school, school type, and free lunch participation were included as covariates in all models. Post-hoc partial f-tests and linear combinations were used to assess any significant effects of sociodemographic variables.

Cognitive School Engagement

A model of the effect of school climate variables on a student's cognitive engagement was estimated by conducting a series of multiple linear regressions to test the following hypotheses:

- Hypothesis 1: Safety will be positively correlated with cognitive engagement.
- Hypothesis 2: Teacher support will be positively correlated with cognitive engagement.
- Hypothesis 3: Voice will be positively correlated with cognitive engagement.
- Hypothesis 4: Voice will be the strongest predictor of cognitive engagement.

In Model 1, cognitive school engagement was regressed on safe learning environment. The results showed significant effects of student's sense of feeling safe at school with their cognitive engagement (Safe Environment (β=.45, $p<.001$). In simple terms, for every one-point increase in a student's perception of feeling safe in his/her school, his/her cognitive engagement score will increase by .45. This suggests that school safety is an influential determinant of cognitive engagement. Model 1 also showed a significant negative effect of being male (β = -.11, $p<.01$) indicating that males, on average, have .11-point lower cognitive engagement scores than females, after controlling for other variables in the model. The first model accounted for 24% of the variance in cognitive engagement (R^2 = .24, adjusted R^2 = .22) and the overall model was significant $F(11, 501) = 14.51$, $p<.001$).

In Model 2, a second dimension of school climate, supportive adult relationships, was added as an independent variable. The results indicated that school safety and supportive adult relationships were both significant predictors of cognitive engagement (safety β =.25, $p<.001$; supportive adults β =.27, $p<.001$). The negative effect for male students remained significant in the second model. There was a notable decline in the effect of the safety variable, (from .45 in Model 1, to .25 in Model 2) indicating a potential mediating effect of supportive adults. Model 2 accounted for 27 percent of the variance in cognitive school engagement (R2=27, adjusted R^2=

.25) and was also significant (F (12, 500) = 15.63, p<.001). Using R-squared and AIC comparisons to indicate good model fit, this second model AIC (Model 1=1093, Model 2=1073) was determined to be a better overall fit compared with Model 1.

A third school climate variable, youth voice in decision making, was included as an independent variable in Model 3. The results showed a significant effect for the new variable (β=.21, p<.01), indicating that a student's perception of having voice in decision making positively and significantly predicts his/her cognitive school engagement. This is to say, that after accounting for school safety and support from adults, a one-point increase in a student's youth voice score will result in a .21-point increase in his/her cognitive engagement score. Supportive adults and safe school environment were also significant predictors of cognitive engagement (β=.14, p<.05; β=.20, p<.001, respectively). On average, males had lower cognitive engagement scores compared with females (β= -.10, p<.05). Model 3 accounted for 29 % of the total variance (R2=.29, adjusted R2=.27) and the overall model was significant (F (13, 499) = 15.64, p<.001). Using AIC to compare model fit, Model 3 (AIC 1063) was determined to be preferable to the first two models.

Full regression results modeling how the school climate variables affect cognitive school engagement are presented in Table 8. The overall results show that all three school climate factors are important predictors of a student's cognitive engagement at school, providing evidence to support Hypotheses 1, 2, and 3. Youth voice was also strongest predictor of cognitive engagement, supporting Hypothesis 4.

Aside from showing the relative influence of all three school climate factors on a student's cognitive engagement, the notable decline in the influence of the other school climate factors after including youth voice in the model indicates a partial mediating role of youth voice.

This is to say, that school safety and supportive teachers may provide the conditions for youth feel a sense of voice, which in turn increases their cognitive engagement in school. Similar research (Serido et al., 2011) has found youth voice to function as a mediator between supportive adults and activist tendencies among youth in participating in community-based after-school programs. This potential mediating relationship is further explored and discussed in a subsequent section of this paper.

Table 8

Summary of Multiple Regression Analysis for DV Cognitive Engagement

	Model 1			Model 2			Model 3		
Variable	Coef. (b)	SE	Beta	Coef. (b)	SE	Beta	Coef. (b)	SE	Beta
Black	0.21	0.11	0.13	0.19	0.11	0.12	0.17	0.11	0.11
White	0.16	0.12	0.10	0.13	0.11	0.08	0.11	0.11	0.07
Hispanic	0.06	0.13	0.03	0.05	0.13	0.02	0.06	0.13	0.03
Grade 10	-0.14	0.09	-0.08	-0.13	0.09	-0.08	-0.15	0.09	-0.08
Grade 11	-0.09	0.09	-0.06	-0.08	0.09	-0.04	-0.08	0.08	-0.05
Grade 12	-0.16	0.10	-0.08	-0.12	0.09	-0.06	-0.14	0.09	-0.07
Male	-0.18**	0.06	-0.11**	-0.17**	0.06	-0.11**	-0.15*	0.06	-0.10*
Free Lunch	0.10	0.08	0.06	0.08	0.08	0.05	0.10	0.08	0.06
Alternative School	-0.04	0.08	-0.02	-0.08	0.07	-0.05	-0.07	0.07	-0.04
Clark Street School	0.06	0.09	0.03	0.03	0.09	0.01	-0.03	0.09	-0.02
Safe Environment	0.4***	0.04	0.45***	0.23***	0.05	0.25***	0.19***	0.05	0.20***
Supportive Adults	-	-	-	0.24***	0.05	0.27***	0.13*	0.06	0.14*
Youth Voice	-	-	-	-	-	-	0.19**	0.06	0.21**
Emotional Engagement	-	-	-	-	-	-	-	-	-
Constant	2.21	0.19	.	2.06	0.19	.	1.95	0.19	.
F(df)	F (11, 501) = 14.51			F (12, 500) = 15.63			F (13, 499) = 15.64		
R2	0.24			0.27			0.29		
Adjusted R2	0.22			0.25			0.27		
AIC	1093.34			1073.79			1063.9		
BIC	1144.23			1128.91			1123.24		

The intercept value represents the average value of cognitive engagement of 9th grade female participants in traditional schools not receiving free lunch. *p<.05, **p<.01, ***p<.001

Emotional School Engagement

Whereas cognitive engagement refers to a student's sense of investment and valuing the importance of their school work, emotional engagement is a student's feeling of attachment, connection, and belonging to their school, (regardless of how they feel about school work). To understand the effect of school climate variables on student's emotional engagement a model was estimated by conducting a series of multiple linear regressions. The model(s) tested the following hypotheses:

- Hypothesis 5: Safety will be positively correlated with emotional engagement.
- Hypothesis 6: Teacher support will be positively correlated with emotional engagement.
- Hypothesis 7: Voice will be positively correlated with emotional engagement.

In Model 1, emotional school engagement was regressed on safe learning environment. The results showed that a student's perception of safety at school significantly predicted their emotional engagement (Safe Environment (β=.65, $p<.001$). As a sense of safety increases by a single point, a student's sense of emotional engagement improves by .65. There were significant racial influences compared with the reference category (other races), but post-hoc partial F tests and linear combinations found no significant differences between those races. The first model accounts for 48% of the variance in emotional engagement ($R^2 = .28$, adjusted $R^2 = .27$) and the overall model was significant $F(13,499) = 15.64$, $p<.001$).

In Model 2, a second dimension of school climate, supportive adult relationships, was added as an independent variable. The results indicated that school safety and supportive adult relationships were both positive significant predictors of cognitive engagement (safety β =.48,

p<.001; supportive adults β =.24, p<.001). Model 2 was also significant F (12,500) = 44.01, p<.001. Using R-squared and AIC to indicate good model fit, this second model (R^2.=.51, adjusted R^2=..50 and AIC (983) explained more variance and was a better overall fit compared with Model 1.

Youth voice in decision-making was added as independent variable in Model 3. The results showed youth voice to positively and significantly predict emotional engagement (β=.13, p<.05), indicating that higher levels of youth voice make significant contributions to students' emotional engagement at school. However, the strongest predictors of emotional engagement were a safe learning environment (β=.46, p<.001) and supportive teachers (β=.16, p<.01). Males were significantly more emotionally engaged in school (β=.13, p<.05) compared with female students. Students attending Clark Street School were also significantly more emotionally engaged (β=.12, p<.01) compared with students attending traditional and alternative schools. Overall, model 3 was significant, F (13,499) = 41.58. The model accounted for 51% of the variance in emotional engagement, (R^2=.52, adjusted R^2=.50), showing that all three school climate factors, especially school safety, are foundational for promoting a sense of emotional attachment and engagement to school. Using AIC (978), BIC (1038), and R^2 change, Model 3 was determined to be the have the best model fit.

Table 9

Summary of Multiple Regression Analysis for DV Emotional Engagement

	Model 1			Model 2			Model 3		
Variable	Coef. (b)	SE	Beta	Coef.	SE	Beta	Coef.	SE	Beta
Black	0.22*	0.10	0.12*	0.20	0.10	0.11	0.18	0.10	0.10
White	0.34**	0.11	0.18**	0.31	0.11	0.17	0.30	0.10	0.16
Hispanic	0.25*	0.12	0.09*	0.23	0.12	0.09	0.24	0.12	0.09
Grade 10	-0.05	0.08	-0.02	-0.04	0.08	-0.02	-0.05	0.08	-0.02
Grade 11	-0.11	0.08	-0.06	-0.10	0.08	-0.05	-0.10	0.08	-0.05
Grade 12	-0.16	0.09	-0.07	-0.11	0.09	-0.05	-0.13	0.09	-0.06
Male	0.11	0.06	0.06	0.11*	0.06	0.06*	0.13*	0.06	0.07*
Free Lunch	0.03	0.07	0.02	0.01	0.07	0.01	0.03	0.07	0.02
Alternative School	0.12	0.07	0.07	0.09	0.07	0.05	0.09	0.07	0.05
Clark Street School	0.30**	0.08	0.15**	0.27**	0.08	0.13**	0.24*	0.08	0.12*
Safe Environment	0.67***	0.03	0.65***	0.49***	0.05	0.48***	0.46***	0.05	0.45***
Supportive Adults	-	-	-	0.24***	0.05	0.24***	0.16**	0.06	0.16**
Youth Voice	-	-	-	-	-	-	0.13*	0.05	0.13*
Constant	0.59	0.17	.	0.44	0.17	.	0.36	0.17	.
F(df)	F(11, 501) = 43.49			F(12, 500) = 44.01			F (13, 499) = 41.58		
R2	0.49			0.51			0.52		
Adjusted R2	0.48			0.5			0.5		
AIC	1007.31			983.38			978.71		
BIC	1058.19			1038.51			1038.07		

The intercept value represents the average value of cognitive engagement of 9th grade female participants in traditional schools not receiving free lunch.
* <.05, **<.01, ***, <.001

In Model 1, Black, White, and Hispanic were significantly different from students of other races. However, there were no significant differences between these races, as indicated by partial F tests and lincom.

Clark Street was significantly different from alternative high schools and traditional high schools.

Mediating Relationships:

Previous studies regarding YAP in after school contexts have found evidence supporting the idea that youth voice plays a mediating role between the effects of supportive adults and a variety of positive psycho-social outcomes, including program engagement (Serido 2011). Based on this literature, the current study hypothesized that support from teachers would predict a student's sense of having voice, which would in turn effect their level of engagement. Specifically:

- Hypothesis 8: Voice will mediate the relationship between teacher support and cognitive engagement
- Hypothesis 9: Voice will mediate the relationship between teacher support and emotional engagement.

Findings from the multiple regressions in the present study found some evidence of mediating effects of youth voice. Based on guidelines established by Barron and Kenney (1986), there is evidence of possible mediation when a significant predictor variable becomes insignificant upon the inclusion of a new variable into the regression model. As seen in Table 9, the coefficient for Supportive Adults was reduced from .24 to .16 after accounting for Youth Voice in the model. That is, there was a weakened effect of supportive adults on a student's emotional engagement. A similar effect can be seen for the cognitive engagement outcome in Table 8. Post-hoc tests were run to calculate direct, indirect, and total effects of youth voice and supportive adults on both engagement variables. Sobel-Goodman tests were used to measure the significance of mediating effects of voice. Based on the results, there was insufficient evidence to support hypotheses 8 and 9 that voice mediated the effect of support on engagement outcomes.

Full Model

Previous studies on school engagement suggest relationships between different types of engagement. For example, Fredericks et al (2004) found emotional engagement to predict behavioral engagement. Other research has shown supporting connections between behavioral, emotional and cognitive dimensions of engagement (Wang et al 2012, 2013) and several studies have identified school engagement as a mediator between social-ecological constructs (including teacher student relationships) and academic achievement (Li Lerner & Lerner 2010).

The first sets of models tested in the current study found significant, positive, influences of school climate factors with student emotional and cognitive engagement. To understand the relationship among all of the variables, a final model was estimated by regressing cognitive school engagement on the three school climate variables and emotional engagement. Post-hoc tests of direct, indirect, and total effects of each key variable using Barron and Kenny's (1986) process and Sobel-Goodman tests were conducted to test for mediation effects of emotional engagement. The model sought to answer the question: *Do the underlying constructs of school climate contribute to a student's sense of emotional engagement, which in turn leads to cognitive engagement?* This study hypothesized that school climate factors that emotional engagement or sense of belonging at school would predict a student's cognitive engagement. The full model tested the following:

- Hypothesis 10: Emotional engagement will mediate the relationship between safety, support, voice, and cognitive engagement. Compared with all other models, the full model will have the best fit.

The results from the full model found emotional engagement to be the strongest significant predictor of cognitive engagement (β=.50, p<.001). Youth voice was the only school climate variable with a significant direct impact on cognitive engagement (β=.12 , p<.01). As seen in prior models, males were significantly less engaged their female peers (β= -.13 , p<.001) Overall, the full model was significant (F(14, 498 = 24.48, p<.001, R2=.41, adjusted R2=.39) Compared with previous models tested, the full model had the best overall fit (AIC 972, BIC 1036). Results from the full model are presented in Table 10:

Table 10

Cognitive Engagement predicted by Safe Environment, Supportive Adults, Youth Voice, and Emotional Engagement			
	Model 4		
Variable	Coef. (b)	SE	Beta
Black	0.09	0.10	0.05
White	-0.02	0.10	-0.01
Hispanic	-0.05	0.12	-0.02
Grade 10	-0.13	0.08	-0.07
Grade 11	-0.04	0.08	-0.02
Grade 12	-0.09	0.09	-0.04
Male	-0.21***	0.06	-0.13***
Free Lunch	0.09	0.07	0.05
Alternative School	-0.11	0.07	-0.07
Clark Street School	-0.13	0.08	-0.08
Safe Environment	-0.02	0.05	-0.02
Supportive Adults	0.06	0.06	0.06
Youth Voice	0.13**	0.05	0.15**
Emotional Engagement	0.44***	0.04	0.50***
Constant	1.79	0.17	.
F(df)	F (14, 498) = 24.48		
R2	0.41		
Adjusted R2	0.39		
AIC	972.6		
BIC	1036.21		

The intercept value represents the average value of cognitive engagement of 9th grade female participants in traditional schools not receiving free lunch.
* <.05, **<.01, ***, <.001

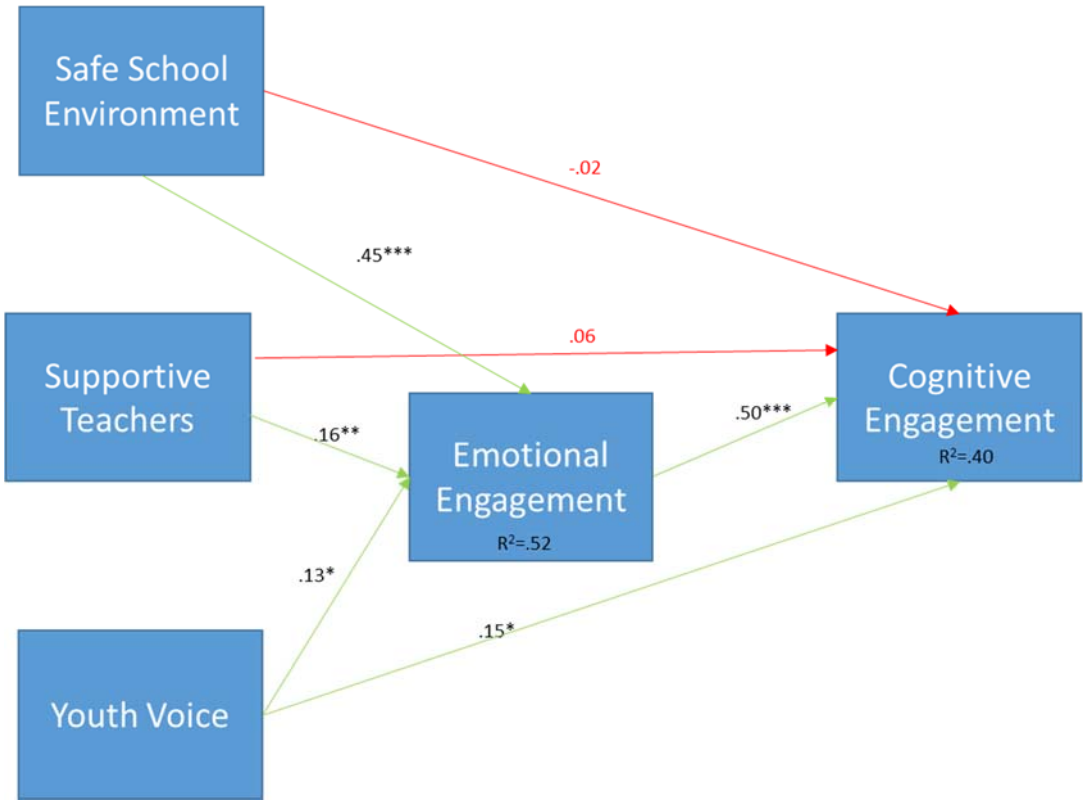
Compared with all other models, the full model suggested that emotional engagement partially mediated the effects of school climate factors on student cognitive engagement. To test the extent of mediation, the direct, indirect, and total effects were calculated using Barron and Kenny's (1986) process. The results were confirmed using Sobel-Goodman Tests. These results are depicted in a path diagram in Figure 3:

Sobel test results showed the relationship between student's sense of safety and cognitive engagement was fully mediated by emotional engagement ($z=6.82$, $p<.001$). The tests indicated that 56% of the total effect of supportive teachers on cognitive engagement was mediated by emotional engagement. This partial mediation was significant ($z=2.84$, $p<.01$), suggesting that supportive teachers influence a student's emotional engagement, which in turn is a determinant of their cognitive engagement. Finally, the relationship between youth voice and cognitive engagement was partially mediated by emotional engagement. Youth voice had a significant direct effect on cognitive engagement ($b=.13$, $p<.01$), an indirect effect on cognitive engagement through emotional engagement ($b=.06$, $p<.05$), and a significant total effect ($b=.19$, $p<.001$). Thirty (30%) percent of the total effect of youth voice on a student's cognitive engagement was mediated by their emotional engagement. The partial mediation indicated by these results was significant, ($z=2.47$, $p<.05$). Overall, these finding suggest that each element of school climate predicts emotional engagement, which consequently predicts cognitive engagement.

As can be seen in Figure 3, supportive teachers had a positive direct effect on emotional engagement ($\beta=.16$, $p<.01$), and a positive indirect effect on cognitive engagement through emotional engagement. That is, students who feel more support from teachers were more emotionally engaged in school, and students who were more emotionally engaged had higher cognitive engagement scores. In the full model, a student's sense of feeling safe at school had no

direct effect on their cognitive engagement, but did have a positive direct effect on emotional engagement. School safety also had a positive indirect effect on cognitive engagement through emotional engagement. Tests found that 100% of the total effect of a safe school environment on cognitive engagement was mediated by emotional engagement. The full model revealed a unique role for youth voice as it had direct effects on both emotional and cognitive engagement and positive indirect effects on cognitive engagement through emotional engagement. These results confirm Hypothesis 10 and suggest that each element of school climate predicts a student's cognitive engagement by first providing a sense of emotional connection and engagement to the school setting. (Student's with a strong foundation of emotional engagement, generated by their experience in a school climate, determine their cognitive engagement at school).

Figure 3: Path Diagram of School Climate Effects on Emotional and Cognitive Engagement.



Summary

The results of the quantitative analysis indicate the extent to which school climate factors are associated with a student's emotional and cognitive engagement at school. Considering emotional and cognitive engagement as separate, distinct outcomes, the findings showed that school safety was a strong and significant predictor of both emotional and cognitive engagement. The safer a student feels at school, the more they will feel emotionally connected. Consequently these emotionally connected students will more frequently be cognitively engaged - finding their school work interesting, meaningful, valuable and important. The results also showed an important role of supportive teachers in promoting a sense of emotional and cognitive engagement of their students. The more a student feels supported, the more they will be engaged in both dimensions. Finally, the regression results identified a student's level of having a voice in decision making as a strong predictor of engagement. As a full model, with emotional and cognitive engagement both included as outcomes, the results suggested that safety, teacher support, and youth voice all contribute to a student's emotional engagement. In this full model, only youth voice directly predicted a student's cognitive engagement. A student's perception of having voice also had significant positive association with their emotional engagement. As such, voice appears to be a critical school climate factor influencing both dimensions of engagement directly and indirectly. Finally, the results of the full model show a strong influence of emotional engagement on a student's cognitive engagement.

The inclusion of socio-demographic variables, including the type of school a student attends, in all of the analyses yielded several important findings. The results showed male students to be less cognitively engaged in school, but more emotionally engaged compared with their female peers. Race, economic status, and a student's grade level had no significant

influence on either dimension of engagement. The type of school a student attended did affect emotional engagement, with Clark Street Students having significantly higher emotional engagement scores. However, there were no differences in the levels of cognitive engagement between student's attending different schools. Similarly, the analysis showed significant differences in students' perceptions of having a voice in decision making and feeling supported by adults. Not surprisingly, Clark Street and Alternative school students had higher voice and support scores compared with their peers in traditional school settings. As controls in the regression analyses, the results yield a model of how school climate is associated with engagement for any given student. All things equal, school climate impacts the cognitive engagement of any student in any school setting, and these effects are experienced through emotional engagement.

In the next section I position these results in the context of existing literature and discuss what the results suggest for school climate policies.

CHAPTER 7

DISCUSSION

There is growing recognition among education scholars that the school environment is a large determinant of the academic success of students (Tough 2016). While the idea that school climate affects student engagement is not new, strategies for building quality school climate as a school improvement strategy has regained attention in recent years. This study adopted Cohen's (2009) definition of school climate as the "quality and character of school life that is based on patterns of students', parents' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (182). Prior studies have shown school climate dimensions to be associated with an array of positive youth development outcomes (Li et al., 2010), emotional engagement and school connectedness (Blum 2005; Wang et al., 2011), cognitive engagement (Wang et al 2015), academic competence and school achievement (Li et al., 2010), as well as collective and social trust and a variety of other pro-social outcomes (Adams et al., 2015, Flanagan et al., 2010). Despite multitude studies offering evidence that school climate is associated with engagement, researchers have called for studies to further understand the unique contributions of the different elements of climate.

Drawing from the notion that engagement is a multidimensional construct, this study aimed to contribute to this growing body of research regarding climate related outcomes in three ways. The primary objective was to identify the relative effects of school climate dimensions on both emotional and cognitive engagement. Second, by including two dimensions of engagement in the analysis, the study aimed to learn how emotional engagement was associated with cognitive engagement. Finally, the study included student voice and teacher support as

independent climate variables in the study design as a way of understanding the potential of Youth-Adult Partnership as a school climate and school improvement approach.

In this chapter, I summarize the findings of this study in the context of other recent research on school climate, student engagement, and Youth-Adult Partnership. I begin with a summary of the ways that each predictor influences engagement, and the effects of socio-demographic variables. Next, I discuss the potential of youth-adult partnership as a strategy for promoting positive school climates. Finally, I present limitations of the study and offer suggestions for future research.

Supportive Teachers and School Staff

The outcomes associated with teacher-student relationships have been a topic of interest in the social sciences for many years. In theory and practice, the notion that supportive teachers are essential for student success is well established (Wang et al., 2010, Smith et al 2009). We know that good teachers and adult staff make a difference in a student's academic and pro-social growth (Jones 2011, Wang et al 2010). Much of the recent research about teacher support is rooted in a perspective of nurturance, social support of students, or support of academic tasks and mastery. The current study is unique as it examined a specific type of support: support for student voice, agency, and opinions. Students were asked about their perceptions of trust, respect and balance of power between students and teachers. As such, it makes a distinct contribution to existing literature on the role of supportive teachers.

The current study confirms this prior research and contributes to this body of research by offering insight into the relative effects of support on different dimensions of engagement. Regression results showed that student perceptions of feeling supported by teachers is strongly associated with their emotional engagement. Interestingly, this study's regression analysis found

supportive teachers to be a strong predictor of emotional engagement, but not directly associated with cognitive engagement. Rather than having a direct influence on cognitive engagement, supportive teachers help to establish a student's sense of emotional engagement, which in turn, affects cognitive engagement. This is not to say that teachers do not affect cognitive engagement. Indeed, teacher support is a significant and prominent determinant of a student's interest and dedication to their schoolwork, because it first influences a student's emotional engagement.

This finding, that supportive teachers are critical to emotional engagement, is consistent with recent research. For example, Wang and Holcombe's (2010), longitudinal study on effects of school climate on engagement found teacher social support to be most strongly associated with student's emotional engagement for middle school students. Also consistent with the current study, Wang and Holcombe found that emotional engagement predicted cognitive engagement, which was associated with higher academic performance (2010). Similarly, Krauss et al (2017) found supportive relationships with adults were significantly associated with a middle school student's emotional, but not cognitive school engagement.

These results have practical implications. For example, knowing that emotional engagement mediates cognitive engagement and that supportive teachers are key to emotionally engaged students could have many possible implications for teacher training, professional development, and even teacher performance review. That said, there are limitations to this finding, for example, little is known about specific characteristics of support. I discuss this and other limitations later in this chapter.

Youth Voice in Decision Making – A critical element of success

Few contemporary studies on student engagement have looked specifically at the ways student voice is associated with engagement. But, we know from multiple studies of youth in out-of-school contexts that, youth voice is critical to youth development, leadership development, as well as for developing a sense of agency and empowerment (Benson et al., 2006, Zeldin 2004, Krauss et al., 2014). This study integrated that youth development perspective to understand how voice functions in school settings. High school students were asked about how they were involved in planning programs at the school, their perception of being heard on matters of school and personal concern, and whether or not they felt teachers took their ideas seriously. Using these recently validated measures to understand how voice is associated with other elements of a school climate, and ultimately to the outcome of engagement makes unique contributions to research and practice alike.

One of this study's most remarkable findings is that youth voice was a significant predictor of both emotional engagement and cognitive engagement. Whereas teacher support affected cognitive engagement indirectly, by helping to establish a student's emotional engagement, youth voice had direct and indirect impacts on both emotional and cognitive engagement. Students who perceived having a voice in school matters had higher levels of emotional engagement, and consequently, higher levels of cognitive engagement. Importantly, youth voice also had a significant direct effect on cognitive engagement. This is to say, that a student who may not be emotionally engaged can still be cognitively engaged in school if they are afforded opportunities to exercise voice. This supports similar findings from recent studies examining effects of student voice in a variety of contexts. Research on youth in out-of-school time spaces has shown that voice strongly predicts student's sense of agency, empowerment, and

sense of community (Krauss et al., 2017; Zeldin, Gauley, et al., 2015; Zeldin et al., 2015). Several longitudinal studies on school engagement have shown that elements of student voice (though not a specific measure of youth voice) are associated with behavioral, cognitive, and emotional engagement (Fredericks et al., 2004; Wang et al 2010, 2012).

What this suggests is that schools that promote youth voice in decision-making at individual and school levels may be better positioning their students for success as opposed to schools that do not. Qualitative studies on young people's experiences in school and out of school settings consistently find that environments in which youth opportunities express themselves have better outcomes for individuals (Mitra 2012; O'Donoguhe 2007). These studies also emphasize that voice is increasingly important as students grow older (Larson et al., 2005). The current study, which uses a sample of high school aged students, contributes quantitative evidence supporting these existing studies. From a practical perspective, this study suggests that schools that intentionally integrating and emphasizing youth voice into school operations, may have more engaged students.

Feeling Safe at School

The influence of school safety on student engagement, as well as on a variety of developmental outcomes, is thoroughly documented in research (Wang et al., 2012; Fredericks et al., 2004; Blum 2005). The current study confirms this existing evidence. Regression models found that student perception of feeling safe in their learning environment was an important predictor of their level of engagement. Regression analysis and mediation tests showed that a student's sense of feeling safe was directly associated with their level of emotional engagement. This suggests that schools that deliberately implement policies and systems aimed at school safety may result in improvements in how their students engage with their schoolwork.

Emotional Engagement and Cognitive Engagement

Recent studies indicate that emotional and cognitive engagement are interrelated (Fredericks et al., 2004; Wang and Holcomb 2010; Krauss et al., 2017). However, few studies have examined how emotional engagement might serve as a key mediator of cognitive engagement The current study's regression analyses showed that emotional engagement was the strongest predictor of cognitive engagement. Students who felt more emotionally engaged had higher levels of cognitive engagement. This suggests that in order for students to be cognitively engaged, they must first be emotionally engaged. Emotional engagement is fostered through a safe learning environment, supportive teachers, and youth voice. While each of these dimensions had different degree of effect on emotional engagement, all had significant influences on emotional engagement. This finding supports the concept that schools should place emphasis on supporting the social and emotional needs of students to achieve better academic related results (Noddings 1992; Tough 2016).

Socio-demographic and School Type Effects

For many years, social science researchers have tried to understand the relative effects of socio-economic factors on academic achievement (Coleman 1966; Viadero 2006). Drawing from assumptions related to the human ecological model, many recent studies have explored the comparative effects of SES factors, such as income, race, with school-based factors such as curriculum type, interpersonal trust, safety policies and other elements of school climate on student engagement and achievement (Hoy et al., 2006; Davis et al., 2015; Bryk et al., 1993). Indeed, student engagement and achievement is influenced by multitude factors inside and outside of the school. However, recent studies consistently show that school climate effects outweigh socio-demographic factors when it comes to engagement (Davis et al., 2015). Similar

studies on positive youth development outcomes and program engagement in non-school settings frequently show that setting-level factors (support, safety, voice, peer relationships) have significant influences on pro-social outcomes after controlling for socio economic factors. This is to say, setting-level factors are highly influential, and may be able to moderate the effects of outside factors. Some scholars use this as evidence that school based interventions; for example, have potential for counteracting negative effects of poverty on student achievement (Davis et al., 2015).

The current study confirms those findings. In the study's final (full) model, after controlling for SES factors, regression results showed that school climate factors (voice, safety, and support) significantly predicted emotional engagement, which in turn predicted cognitive engagement. In other words, school climate factors affected student engagement regardless of their families' income, race, and age. Positive school climate – feeling supported by teachers, having a voice in school matters, and feeling safe, affects all students in similar ways. There were gender-based differences, with male students being more emotionally engaged than females, but less cognitively engaged. These gender differences are consistent with other recent research (Meece et al., 2006; Wang et al.,2013).

Unlike SES factors, the type of school a student attended was a significant influencing factor on engagement. In general, students attending Clark Street School, where democratic, place-based, project-based education is foundational, reported higher, statistically significant overall scores on measures of voice, support, and emotional engagement compared with peers learning in other settings. Similarly, students attending alternative high schools, where they have more opportunities for personalized learning and flexibility in schedule were more emotionally engaged compared with their students at traditional schools. Despite these key differences in

emotional engagement, there were no differences between schools for cognitive engagement. This is not to say the result is not practically significant, as CSCS and alternative school students were previously disengaged (likely), in traditional school environments. The fact that the full model is relevant to all students, attending all schools, is remarkable. It suggests that both Clark Street School and alternative schools have an approach to school operations, teaching, and other school climate factors that are effective for bolstering engagement among students who were not succeeding in other settings. It also speaks to the strong influence of school climate on engagement, and suggests school-based interventions that promote safety, support and voice can bolster engagement for any student.

Potential for Youth-Adult Partnership as a School Improvement Strategy

Many public schools incorporate innovative curriculum and climate strategies to bolster engagement. Democratic education, place-based strategies (such as service-learning and project-based learning) are among just a few examples of innovating to bolster engagement. While all of those innovations foster student voice within the context of supportive teachers, few public schools intentionally incorporate Youth-Adult Partnership into everyday school operations. This presents a challenge for research on the potential of Y-AP in schools. The few studies of Y-AP in schools have shown positive outcomes for students and school alike (Mitra 2012, Krauss and Kornbluh 2017). Y-AP, we know, has positive effects on individuals and on the settings where it occurs. Rooted in human ecological theory, Y-AP affords participants to work together, over time on matters of shared importance. It builds social trust between participants, and allows them to shape the places where they learn. Y-AP promotes agency, empowerment, leadership skills, and has positive influences on social systems (Ozer et al., 2011; Krauss et al., 2014). It also, as this study found, bolsters emotional and cognitive engagement.

Implications for School and Educational Leadership

This study shows that youth voice is strongly, and dynamically associated with emotional and cognitive engagement. Simple school policies, such as student choice of classes or student input on the curriculum and course offerings are examples of ways to promote one aspect of student voice. Those are among unlimited possibilities of interventions that put youth voice and perspective at the forefront of their own education. Indeed, implementing those interventions at any school will require major shifts in long-instilled traditions and bureaucracy, the benefits of altering policies and pedagogy that may have existed for years. That said, history shows that research does inform policy, and it can do so quickly. This is especially the case for public schools.

This study suggests that schools need to focus on engagement, as opposed to achievement. Importantly, this study's findings imply that schools should focus attention on emotional engagement. Doing so will require convincing teachers and administrators that voice, and teacher support of voice, helps their students achieve. Schools will need to incorporate strategies to engage students into professional development and it needs to be built into the curriculum. Schools will need flexibility in scheduling to provide teachers the time to develop relationships with students. Some of these things can be accomplished through strong educational leadership. Others will require broad public shifts.

Fortunately, there is momentum for an emphasis on engagement. For example, personalized learning has become more popular and realistic through technology. Many schools are now using survey tools, such as Gallup's student engagement poll to guide school decision-making.

Limitations and Suggestions for Future Research

This study makes unique contributions to research aimed at understanding how to engage students. It brings a perspective and knowledge from youth development and out-of-school time research into the school setting. The study demonstrates the important influence of youth voice and suggests that teacher support of a student's voice, agency, and opinions is critical for student engagement. However, the study is limited in several ways.

First, the current study used a strictly quantitative approach to understand how school climate factors are associated with engagement. Engagement, as we know, is multi-dimensional, subjective, and nuanced. School climate factors, especially those related to student voice and perceptions of support are highly subjective. There is much to be learned about the ways different students define voice. Mixed methods and qualitative studies of what students mean when they say they have a voice are needed. Likewise, qualitative research on the ways students perceive different types of teacher support would enhance research on school climate and engagement.

A second limitation of this study was the use of cross-sectional data. The cross-sectional design limits us to a single survey, a single snapshot in time, and may not capture the breadth of a student's experience in their school. Longitudinal studies of students in a variety of school settings would enhance our understanding of how school climate factors affect students over time, allowing insight into how a student's experience in setting changes. Longitudinal studies are also useful for dismissing potential spurious relationships in regression models, which are important for discussing causation of a predictor variable, such as school climate, with an outcome, such as engagement, with more certainty. Another limitation is this study's focus on

individual students as opposed to schools. The current analysis examined student's perceptions. While the design included a sample of students attending a variety of schools, which did provide some insight into school-effects, it did not include any quantitative measures to capture the school-based norms, policies, procedures that could account for a student's experience. Mixed methods, and longitudinal studies that could classify those school elements would add much value to engagement research. Further, incorporating the perception of teachers, administration, and parents into analyses on engagement could illuminate other factors affecting engagement.

A related limitation is that the current study did not include peer support as a variable. Research suggests that peer relationships are most influential for individual student's perception of safety, motivation, behavior, and attachment to school (Veiga et al., 2014). The influences of peers affect individual outcomes and the overall climate and culture of a setting (Blum 2005, Osterman 2000). Future research should consider incorporating student perceptions of peer support as an independent variable to gain a broader understanding of factors that affect emotional engagement.

Finally, this study only included one democratic school. Future studies should identify schools, like Clark Street School, that are taking innovative approaches to teaching, learning, and school improvement. Identifying schools that implement Y-AP would particularly important for broadening our understanding of the effects of youth voice and teacher support on engagement. We currently know very little about what Y-AP looks like, in practice, in a public school setting. The current study provided only a glimpse into how student's perceive the core elements of Y-AP. Qualitative and quantitative studies of Y-AP schools would tell us much about how the practice impacts multiple school climate elements as well as outcomes. Such studies would help answer lingering questions such as: How can Y-AP be incorporated into schools?, What are the

barriers to implementing Y-AP and similar practices that build community within a school? ; and How can schools overcome these barriers?

Conclusion

This study's findings contribute to a growing body of research supporting youth-adult partnership as a theory and a practice for promoting an array of positive youth development outcomes, including school engagement. The study sheds light on the important influences that supportive adults and youth voice has on student engagement. As instrumental components of youth-adult partnership, support and voice have different influences on different outcomes. Support is essential for emotional engagement, while voice has impacts on both emotional and cognitive engagement. Combined, as they would be in a youth-adult partnership framework, they can have powerful influences on engagement as a holistic construct. Considering other recent research that has found Y-AP to have benefits for individuals as well as entire settings, it may be an ideal school climate intervention that could lead to high functioning school communities with highly engaged students.

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APPENDIX A

HUMAN SUBJECTS PROTECTION

THE UNIVERSITY of WISCONSIN MADISON

DEPARTMENT OF INTERDISCIPLINARY STUDIES

School of Human Ecology
475 N. Charter St.
Sterling Hall
Madison, WI 53706-1507
608/335-2980
FAX: 608/265-1171

UNIVERSITY OF WISCONSIN-MADISON
Research Participant Information and School Parent Consent Form

Dear Parent or Guardian,

I am asking your permission for your son or daughter to participate in a research study on the impacts of a sexual health curriculum. This study will take place in Madison-based middle schools, high schools, and community centers. The main goals of this study are:

1) to examine whether participation in a sexual health curriculum decreases young people's likelihood of engaging in risky sexual behavior; and
2) to examine whether young people participating in youth development programming at local community centers are more likely to show positive outcomes, such as high self-esteem and confidence, than their peers

I am inviting your son or daughter to participate in this study. If you give permission for your son/daughter to participate, he/she will be asked to complete a survey three times. Your son/daughter will be asked to first complete the survey before participating in the sexual health curriculum. Questions on the survey will ask about positive outcomes. These include measures of self-esteem, empowerment, confidence, school engagement and involvement in extracurricular activities. The survey will also ask questions about young people's sexual health knowledge, attitudes and behaviors. The questions about sexual behavior are sensitive. The questions will ask if the young person has ever had sex and, if so, if a condom was used. Questions also will ask what forms of birth control (i.e. condoms, pills, the ring, etc.), if any, your son or daughter uses. Upon completion of the curriculum, your son or daughter will be asked to complete the same survey a second time. Approximately three months after participating in the curriculum, your son or daughter will be asked to complete the survey again. This will allow us to evaluate the effect of the curriculum over time. The survey will take approximately 25 minutes to complete; therefore participation will require a total of 1.5 hours. You are welcome to contact me if you would like a copy of the survey.

The risks associated with this study are no greater than what young people encounter in daily life. Some questions on the survey may make your son/daughter feel uncomfortable (i.e. questions about sexual behavior), but he/she can choose to skip these questions. Youth can withdraw from the study at any time without penalty. Items from those who withdraw from the study or do not consent will not be collected or used in this study.

Your son/daughter's participation in this study is voluntary and optional. Your son or daughter is welcome to participate in the sexual health curriculum without participating in this study. *Participation in this study will not influence your son or daughter's grades.*

All identifying information will remain confidential. To ensure confidentiality, your son/daughter's name will not appear in any report or publication based on this study. All data will be presented in a combined form without names or other identifiers. Youth participants will be assigned identification numbers on all surveys. Documents linking identification numbers and youth names will be kept in a secured and locked cabinet.

Your son/daughter will not receive any direct benefit from this study. However, as an incentive for participating youth will be offered a $10 Target gift card upon completion of all three surveys.

If you have any questions, you are welcome to email me at gauley@wisc.edu. You can also contact my advisor, Professor Shepherd Zeldin, at 608-263-2383. If you are not satisfied with the response of the research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education Research and Social & Behavioral Science IRB Office at 608-263-2320.

Sincerely,

Josset Gauley
University of Wisconsin-Madison

Shepherd Zeldin
Professor
School of Human Ecology
University of Wisconsin-Madison

Your Consent

I have read the above statement and agree that my son/daughter can participate in this study. I understand that I am free to withdraw my consent and to discontinue participation at anytime without penalty of any sort. This can be done by contacting Josset Gauley using the contact information provided above.

Son/Daughter's Name (please print) _____

Parent/Guardian's Name (please print) _____

Signature of Parent/Guardian _____ Date _____

THE UNIVERSITY of WISCONSIN MADISON

DEPARTMENT OF INTERDISCIPLINARY STUDIES

School of Human Ecology
475 N. Charter St.
Sterling Hall
Madison, WI 53706-1507
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UNIVERSITY OF WISCONSIN-MADISON
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I am inviting you to participate in this study. If you agree to participate, you will be asked to complete a survey three times. You will be asked to first complete the survey before participating in the sexual health curriculum. Questions on the survey will ask about positive outcomes. These include measures of self-esteem, empowerment, confidence, school engagement and involvement in extracurricular activities. The survey will also ask questions about your sexual health knowledge, attitudes and behaviors. The questions about sexual behavior are sensitive. The questions will ask if you have ever had sex and, if so, if a condom was used. Questions will also ask what forms of birth control (i.e. condoms, pills, the ring, etc.), if any, you use. Upon completion of the sexual health curriculum, you will be asked to complete the same survey a second time. Approximately three months after participating in the curriculum, you will be asked to complete the survey again. This will allow us to evaluate the effect of the curriculum over time. The survey will take approximately 25 minutes to complete; therefore participation will require a total of 1.5 hours.

The risks associated with this study are no greater than what you encounter in daily life. Some questions on the survey may make you feel uncomfortable (i.e. questions about sexual behavior), but you can choose to skip these questions. You can withdraw from the study at any time without penalty. Items from those who withdraw from the study or do not assent will not be collected or used in this study.

Your participation in this study is voluntary and optional. You are welcome to participate in the sexual health curriculum without participating in this study. *Participation in this study will not influence your grades*.

All identifying information will remain confidential. To ensure confidentiality, your name will not appear in any report or publication based on this study. All data will be presented in a combined form without names or other identifiers. You will be assigned an identification number on all surveys. Documents linking identification numbers to your name will be kept in a secured and locked cabinet.

You will not receive any direct benefit from this study. However, as an incentive for participating you will be offered a $10 Target gift card upon completion of all three surveys.

If you have any questions, you are welcome to email me at gauley@wisc.edu. You can also contact my advisor, Professor Shepherd Zeldin, at 608-263-2383. If you are not satisfied with the response of the research team, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education Research and Social & Behavioral Science IRB Office at 608-263-2320.

Sincerely,

Josset Gauley
University of Wisconsin-Madison

Shepherd Zeldin
Professor
School of Human Ecology
University of Wisconsin-Madison

Your Assent

I have read the above statement and agree to participate in this study. I understand that I am free to withdraw my assent and to discontinue participation at anytime without penalty of any sort. This can be done by contacting Josset Gauley using the contact information provided above.

Your Name (please print) _____

Your Signature _____ Date _____

University of Wisconsin-Extension
Extension Building, Room 302
432 North Lake Street
Madison, WI 53706
608-263-2383

Research Participant Information and School Parent Consent Form

July 14, 2013

Dear Parent or Guardian,

I am asking your permission for your son/daughter to participate in a research study on civic engagement and youth development in high schools. This study will take place in Clark Street Community School (CSCS). The main goals of this study are:

1) to study the quality of civic education within CSCS and done in collaboration with community organizations, to continuously strengthen educational programming; and
2) to examine whether young people participating in civic education at CSCS show positive outcomes in areas such as self-confidence, sense of belonging, empowerment and civic engagement.

I am inviting your son/daughter to participate in this study. If you give permission for your son/daughter to participate, he/she will be asked to complete a survey at three different times over the course of the school year. This survey will be distributed and taken in the classroom. Questions on the survey will ask about positive outcomes. These include measures of confidence, school engagement and involvement in extracurricular activities. The survey will take approximately 25 minutes to complete; therefore participation will require a total of 1.5 hours.

Over the year, staff from the University of Wisconsin-Extension may be observing your son/daughter as he/she works with their peers and teachers in groups (e.g., curriculum committees, school advisory communities, service learning projects). At all times, staff will announce themselves and request permission to observe. If your son/daughter and their peers are uncomfortable and do not give verbal consent, we will not continue the observation.

If you give permission for your son/daughter to participate, he/she may be asked to participate in a focus group. During the focus group, your son/daughter will be asked about his/her experiences at the school. Questions will ask youth to describe what makes them feel safe, valued, and supported while attending the school Questions will ask youth to provide specific examples of their experiences here and what they find engaging. We anticipate the focus group will last between 30 and 60 minutes, depending on the length of participants' responses.

Focus groups will be audio-recorded. Participants must agree to be audio-recorded in order to participate in this study. Those participants who do not want to be audio-recorded will not be allowed to participate. Focus groups will also be transcribed. Transcriptions will be kept of file for 10 years. Audio-recordings

will be destroyed after 1 year. Only study team personnel will have access to the audio-recordings and the transcripts.

The risks associated with this study are no greater than what your son/daughter encounter in daily life. If questions on the survey make him/her feel uncomfortable, he/she can choose to skip these questions. Your son/daughter can withdraw from the study at any time without penalty. Items from those who withdraw from the study or do not assent will not be collected or used in this study.

Your son/daughter's participation in this study is voluntary and optional. *Participation in this study will not influence his/her grades*.

All identifying information will remain confidential. To ensure confidentiality, your son/daughter's name will not appear in any report or publication based on this study. All data will be presented in a combined form without names or other identifiers. Your son/daughter will be assigned an identification number on all surveys. When we observe student and faculty interactions, his/her name will never be used in reporting of these observations. Documents linking identification numbers to his/her name will be kept in a secured and locked cabinet.

If you have any questions, you are welcome to call me at 608-263-2383 or email me at gauley@wisc.edu. You can also contact Professor Shepherd Zeldin at rszeldin@wisc.edu. If you are not satisfied with our response, or wish to talk with someone about your rights as a research participant, you should contact the Wisconsin Extension Administrator at 262-4387.

Sincerely,

Josset Gauley	Shepherd Zeldin
Research Assistant	Professor
University of Wisconsin Extension	University of Wisconsin Extension
gauley@wisc.edu	rszeldin@wisc.edu

Your Consent

I have read the above statement and agree that my son/daughter can participate in this study. I understand that I am free to withdraw my consent and to discontinue participation at anytime without penalty of any sort. This can be done by contacting Josset Gauley using the contact information provided above.

Son/Daughter's Name (please print) _____

Parent/Guardian's Name (please print) _____

Signature of Parent/Guardian _____ Date _____

University of Wisconsin-Extension
Extension Building, Room 302
432 North Lake Street
Madison, WI 53706
608-263-2383

Research Participant Information and School Youth Assent Form

July 14, 2013

Dear Youth,

I am asking your permission to participate in a research study on civic engagement and youth development in high schools. This study will take place in Clark Street Community School (CSCS). The main goals of this study are:

1) to study the quality of civic education within CSCS and done in collaboration with community organizations, to continuously strengthen educational programming; and
2) to examine whether young people participating in civic education at CSCS show positive outcomes in areas such as self-confidence, sense of belonging, empowerment and civic engagement.

I am inviting you to participate in this study. If you agree to participate, you will be asked to complete a survey at three different times over the course of the school year. This survey will be distributed and taken in the classroom. Questions on the survey will ask about positive outcomes. These include measures of confidence, school engagement and involvement in extracurricular activities. The survey will take approximately 25 minutes to complete; therefore participation will require a total of 1.5 hours.

Over the year, staff from the University of Wisconsin-Extension may be observing you as you work with your peers and teachers in groups (e.g., curriculum committees, school advisory communities, service learning projects). At all times, staff will announce themselves and request permission to observe. If you and your peers are uncomfortable and do not give verbal consent, we will not continue the observation.

If you agree to participate, you may be asked to participate in a focus group. During the focus group, you will be asked about your experiences at the school. Questions will ask you to describe what makes you feel safe, valued, and supported while attending the school Questions will ask you to provide specific examples of your experiences here and what you find engaging. We anticipate the focus group will last between 30 and 60 minutes, depending on the length of participants' responses.

Focus groups will be audio-recorded. Participants must agree to be audio-recorded in order to participate in this study. Those participants who do not want to be audio-recorded will not be allowed to participate. Focus groups will also be transcribed. Transcriptions will be kept of file for 10 years. Audio-recordings will be destroyed after 1 year. Only study team personnel will have access to the audio-recordings and the transcripts.

The risks associated with this study are no greater than what you encounter in daily life. If questions on the survey make you feel uncomfortable, you can choose to skip these questions. You can withdraw from

the study at any time without penalty. Items from those who withdraw from the study or do not assent will not be collected or used in this study.

Your participation in this study is voluntary and optional. *Participation in this study will not influence your grades*.

All identifying information will remain confidential. To ensure confidentiality, your name will not appear in any report or publication based on this study. All data will be presented in a combined form without names or other identifiers. You will be assigned an identification number on all surveys. When we observe student and faculty interactions, your name will never be used in reporting of these observations. Documents linking identification numbers to your name will be kept in a secured and locked cabinet.

If you have any questions, you are welcome to call me at 608-263-2383 or email me at gauley@wisc.edu. You can also contact Professor Shepherd Zeldin at rszeldin@wisc.edu. If you are not satisfied with our response, or wish to talk with someone about your rights as a research participant, you should contact the Wisconsin Extension Administrator at 262-4387.

Sincerely,

Josset Gauley	Shepherd Zeldin
Research Assistant	Professor
University of Wisconsin Extension	University of Wisconsin Extension
gauley@wisc.edu	rszeldin@wisc.edu

Your Assent

I have read the above statement and agree to participate in this study. I understand that I am free to withdraw my assent and to discontinue participation at anytime without penalty of any sort. This can be done by contacting Josset Gauley using the contact information provided above.

Your Name (please print) _____

Your Signature _____ Date _____

APPENDIX B

Youth and Community Survey Items

Safe School Environment

1. I feel safe when I'm in this school.
2. This school makes me feel welcome.
3. Bullying and aggression are not tolerated here.
4. All the people in this school treat me with respect.

Supportive Adult Relationships

1. In this school, it is clear that students and teachers respect each other.
2. Teachers learn a lot from students at this school.
3. There is a good balance of power between students and teacher in this school.
4. Students and teachers trust each other in this school.
5. Students and teachers learn a lot from working together in this school.

Youth Voice

1. I have a say in planning programs at this school.
2. In this school, I am encouraged to express my ideas and opinions.
3. I am expected to voice my concerns when I have them.
4. The teachers take my ideas seriously.

Cognitive School Engagement

1. Going to school is enjoyable.
2. Doing well in school is important for getting a good job.
3. My school work is important to my life.
4. My classes at school are interesting.

5. The things I am learning in school are important for later in life.

Emotional School Engagement

1. I feel close to people at my school.
2. I feel I am a part of my school.
3. I am happy to be at my school.
4. The teachers at my school treat students fairly.