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# Investigating differences in student perceptions of school climate for English Language Learners and their peers

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Investigating differences in student perceptions of school climate for English Language Learners  
and their peers

by

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A THESIS

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## Abstract

As Canada increases in cultural and linguistic diversity each year through immigration, school environments need to adapt to adequately support their increasingly diverse student population. Many high schools have students who are English Language Learners (ELL) who are working towards both gaining proficiency in English and demonstrating an understanding of academic subject matter in English. ELL students can face unique challenges at school such as adjusting to a new culture while trying to learn English and course curriculum. Unfortunately, high school ELL students typically have lower academic scores and lower rates of high school completion than their non-ELL peers. These findings suggest that schools may not be properly supporting ELL students for success.

To better understand how ELL students experience their school environment compared to non-ELL peers, a measure of school climate was used. School climate measures perceptions of school culture and experience that are shaped by the norms and values of a school environment. In this study the Meriden School Climate Survey Student Version (MSCS-SV) was used to assess perspectives of school climate for ELL and non-ELL students. Differences in school climate perceptions between ELL and non-ELL high school students were investigated. School climate ratings relationship with GPA was investigated in both ELL and non-ELL student groups.

A significant difference was found in overall ratings of school climate between ELL and non-ELL high school students. However, the differences with specific factors of school climate were non-significant. This suggests that there may be differences in perceptions of overall school climate for ELL and non-ELL students. Only two factors of the MSCS-SV were predictors of student GPA in the non-ELL group. Adult Support at Home and Academic Support at Home

were positive predictors of GPA for non-ELL students. Our study did not find a significant relationship between any factors of MSCS-SV and GPA for ELL students.

*Keywords: English Language Learner; ELL; ESL; school climate; high school; Meriden School Climate Survey*

## **Preface**

This thesis is original, unpublished, independent work by the author, K. Corrigan. The experiments reported in Chapters 3-5 were covered by Ethics Certificate number REB20-1163, issued by the University of Calgary Conjoint Faculties Research Ethics Board for the project “Examining the relationship between language status and perceived school climate in English Language Learner and Native Speaking high school students” on December 1, 2020.

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## Contents

|  |    |
|--|----|
| Chapter I: Introduction.....   | 1  |
| Chapter II: Literature Review .....  | 6  |
| Historical Foundations of School Climate Research .....                    | 6  |
| Theoretical Framework of School Climate .....                              | 9  |
| Safety .....   | 10 |
| Teaching and Learning.....   | 11 |
| Relationships .....  | 13 |
| School Connectedness.....  | 15 |
| Parent Involvement.....  | 17 |
| Interconnectedness of School Climate dimensions .....                      | 20 |
| School Climate Measures.....   | 20 |
| Impact of School Climate.....  | 24 |
| Importance of School Climate Research.....                                 | 26 |
| Understanding English Language Learner Students.....                       | 27 |
| Barriers to Educational Success for English Language Learner Students..... | 30 |
| School Environment Impacts for English Language Learner Students.....      | 31 |
| Current Study .....  | 35 |
| Research Aims & Hypotheses .....   | 37 |
| Chapter III: Methods.....  | 38 |
| Study Design .....   | 38 |
| Ethics.....  | 38 |
| Potential Risks to Participants.....                                       | 39 |
| Participants .....   | 39 |
| Recruitment .....  | 39 |
| Data Collection .....  | 40 |
| The Meriden School Climate Survey.....                                     | 41 |
| Data Analysis .....  | 44 |
| Statistical Software .....   | 44 |
| Study Aims .....   | 45 |
| Multivariate Analysis of Covariance .....                                  | 46 |
| Multiple Regression .....  | 47 |
| Chapter IV: Results .....  | 48 |
| Demographics.....  | 48 |

|   |    |
|---|----|
| English Language Learner Students .....   | 48 |
| Non English Language Students.....  | 49 |
| Analysis for Primary Aim .....  | 50 |
| Analysis for Secondary Aim .....  | 51 |
| Chapter V: Discussion .....   | 54 |
| Potential Differences in School Climate for ELL and non-ELL Students.....               | 55 |
| School Climate Factors' Relationship with Student GPA in ELL and non-ELL Students ..... | 60 |
| Academic Support and Adult Support at Home: Relationship with Student GPA.....          | 60 |
| Other School Climate Factors and Student GPA in non-ELL Students .....                  | 62 |
| School Climate Factors and GPA in ELL Students.....                                     | 64 |
| Implications .....  | 66 |
| Implications for Research.....  | 66 |
| Implications for Schools .....  | 67 |
| Implications for School Psychologists.....  | 70 |
| Limitations .....   | 73 |
| COVID-19 .....  | 75 |
| Conclusion.....   | 76 |
| References .....  | 77 |



**List of Tables**

Table 1. Comparison of School Climate Measures

Table 2. The Meriden School Climate Survey-Student Version Questions

Table 3. MANCOVA Differences in MSCS-SV for School and ELL Status

Table 4. Multiple Regression MSCS-SV and GPA for ELL Students

Table 5. Multiple Regression MSCS-SV and GPA for non-ELL Students

## **List of Abbreviations**

BICS – Basic Interpersonal Communication Skills

CALP – Cognitive Academic Language Proficiency

DV – Dependent Variable

ELL – English Language Learner

ELLs – English Language Learners

GPA – Grade Point Average

GSA – Gay Straight Alliance

IV – Independent Variable

LGBTQIA+ – Lesbian Gay Bisexual Transgender Queer Intersex Asexual

MANCOVA – Multivariate Analysis of Covariance

MSCS-SV – Meriden School Climate Survey Student Version

Non-ELL – Non English Language Learner

SES – Socioeconomic Status

## Chapter I: Introduction

Canada's population growth is largely driven by immigration resulting in a very diverse population (Chavez, 2019). Between the years of 2011 and 2016, over 1.2 million people immigrated to Canada. Moving forward, immigration levels are predicted to increase as Canada aims to welcome immigrants at a rate of approximately 1% of the Canadian population per year for 2021-2023 (Immigration, Refugees and Citizenship Canada [IRCC], 2020). Before the 1970s, Canada's immigrant population came largely from Europe. In recent decades, individuals moving to Canada have emigrated from a wider variety of countries around the world. The 2016 Canadian census reported Asia and Africa as the most common areas of origin for recent Canadian immigrants (IRCC, 2020). As immigration from a diverse array of countries continues, Canada's linguistic demography changes (Chavez, 2019). While English and French are Canada's two official languages, there are more than 200 languages that have been reported as a first-language by people living in Canada (Corbeil, 2018), and most Canadian immigrants report a language other than English or French as their first language (Chavez, 2019). Although most Canadian immigrants report that they can conduct a conversation in either English or French, many are still working towards increasing their language proficiency. Outside of Quebec, 90% of people who have immigrated to Canada select English as their official language (Chavez, 2019). This means that there are thousands of new Canadians each year that will desire to learn or improve their English for work, school, or everyday communication needs. With increasing levels of immigration from linguistically diverse countries, there is an increasing number of Canadians who are English Language Learner (ELLs). An ELL is a person whose native language is a language other than English who is learning the English Language. The term ELL

only describes an individual's language status and is not indicative of ELLs' diverse cultural and ethnic backgrounds who may be Canadian-born or may have immigrated to Canada.

As Canada increases in cultural and linguistic diversity, school environments need to adapt to adequately support their increasingly diverse student population. ELL students generally have lower rates of academic success than their native English-speaking peers (Callahan, 2005). Understandably, academic achievement may be more difficult for ELLs as they are tasked with both gaining proficiency in English and demonstrating an understanding of academic subject matter in English. Furthermore, they may also be adjusting to new social and cultural norms at school which can cause added stressors. It has been debated if lower levels of academic performance in ELL populations are due to a lack of linguistic or academic proficiency or both (Callahan, 2005). *Linguistic proficiency* or *language proficiency* is the ability to use the language with a level of accuracy to comprehend and communicate meaning. There are several levels of attainment for language proficiency within the domains of speaking, reading, writing, and listening. Generally English proficiency in Canada is determined through the use of standardized assessments. Academic English proficiency is the understanding of curriculum-based language and academic vocabulary that is necessary to complete reading and writing tasks in the classroom (Roessingh, 2016). Academic proficiency and academic vocabulary is sometimes measured directly with individual standardized assessments but is more frequently measured indirectly through large provincial standard assessments (Roessingh, 2016). Although English and academic proficiency are often the primary concerns for many researchers of ELL students, there are other notable concerns for ELL students' academic success. For example, in the United States, ELL students have lower rates of high school completion and postsecondary enrollment than their non-ELL peers (Callahan, 2005; Kanno & Cromley, 2013; Kanno & Varghese, 2010).

In Canada, ELL high school students' academic achievement can vary based on other factors such as refugee status, ethnicity, and age of arrival if they are newcomers (Roessingh & Douglas, 2012b; Wong & Schweitzer, 2017). In Calgary, ELL students generally have similar high school completion rates as native English speakers, but ELL students who are refugees have much lower rates of high school completion (Cooper, 2018). Additionally, ELL students who are still coded for ELL classes in junior high and high school have significantly lower rates of high school completion than native English speakers (Alberta Education, 2009; Ngo, 2012). Students who were coded as ELL in elementary school but not in junior high or high school had similar levels of high school completion as native English speakers (Alberta Education, 2009; Ngo, 2012).

The school experience of ELL students not only affects their current academic functioning but can also impact their future academic and career attainment (Kanno & Cromley, 2013; Kanno & Varghese, 2010; Wong & Schweitzer, 2017). In Calgary, many ELL students struggle when they begin university (Roessingh & Douglas, 2012b). High schools often fail to adequately prepare ELL students for the literacy demands of university (Roessingh & Douglas, 2012b). Disparities in academic achievement between ELL students and non-ELL students may not be solely due to language but due to other compounding factors such as race, ethnicity, socioeconomic status (SES), and teacher expectations (Callahan, 2005; Hoff, 2013; Kanno & Cromley, 2013; Kanno & Varghese, 2010). Some researchers have found that non-linguistic factors interfere with ELL's completion of high school as well as post-secondary access and attainment (Kanno & Cromley, 2013; Kanno & Varghese, 2010). Individual factors such as race, low SES, and family capital can greatly influence academic success as well as environmental factors such as school policies, school organization, stigma, and teacher expectations (Callahan,

2005; Kanno & Cromley, 2013; Kanno & Varghese, 2010). It will be fundamental to consider multiple aspects of ELL students' school experience to better understand the factors influencing their academic success.

Assessing school climate is one way that researchers and school administrators attempt to better understand multiple facets of student and teacher experience at a school. School climate measures perceptions of school culture and experience that are shaped by the norms and values of a school environment (Cohen et al., 2009; Zullig et al. 2010). A positive school climate aims to promote the social and emotional development of students while maintaining their feelings of physical and social safety (Cohen et al., 2009; Zullig et al. 2010). There are several factors within school climate such as support at school, safety, respect for differences, peer support, academic support at home, and level of aggression towards others (Gage et al., 2016). School climate has been associated with student behaviours, attitude, and academic productivity (Berkowitz et al., 2017; Bryk, 2010). Additionally, school climate is predicted to influence academic achievement and access to post-secondary education (Berkowitz et al., 2017). Understanding student perceptions of school climate can help to highlight strengths and weaknesses in the school environment. By addressing vulnerabilities in the school environment, such as issues with feels of safety for student, schools can mitigate the effects of negative school climates such as student dropout (Lee & Burkam, 2003).

Although students who attend the same school share a school environment, they may perceive their school climate very differently. Students who belong to minority groups (including racial, gender, sexuality, or religious minorities) can have diverse school experiences that influence their feelings about their school. While schools aim to treat all students equally, conscious or unconscious biases from teacher or other student can affect how students

experience school (Riley, 2015; Voight & Nation, 2016). For example, students who belong to different racial groups can have significant disparities in their ratings of school climate (Bottiani, et al., 2014; Voight et al., 2015). One school climate study found that Black and Hispanic students had lower ratings of safety, relationships with school staff, school connectedness, and opportunities for participation when compared to White students (Voight et al., 2015). Voight and colleagues (2015) demonstrated that different subgroups of students can have significantly different perspectives of their shared school climate. English language learners could be considered a subpopulation of their school and may have a different perception of their school climate than students that are not English language learners. Understanding discrepancies in perceived school climate for different student groups can help highlight potential inequities in school environments.

Considering the environmental factors that can influence ELL students' academic success (Kanno & Cromley, 2013; Kanno & Varghese, 2010), school climate measures could be useful in investigating how environmental differences impact ELL student experience. Currently, there is a gap in ELL literature in exploring the perception of school climate for ELL students. A significant portion of research regarding ELL students in Canada focuses on the improvement of linguistic and literary skills. Understanding ELL students' perceptions of their school climate can help us better appreciate what environmental factors influence their school experience. Unsupportive aspects of the school environment for ELL students can be addressed at the school level or through policy to best support them for educational success. To begin filling the gap in the literature, the current study aims to investigate differences in perceived school climate between ELL students and non-ELL students. Furthermore, it seeks to explore if grade point average (GPA) impacts perspectives of school climate.

## **Chapter II: Literature Review**

### **Historical Foundations of School Climate Research**

Although there had been some speculative research on school social environment in the first half of the 20<sup>th</sup> century, the study of school climate began in earnest in the 1960s and 1970s (Chirkina & Khavenson, 2018; Zullig et al., 2010). In the 1950s and 1960s, industrial and organizational psychology researchers were analyzing businesses to understand if organizational environment influenced employee morale, productivity, and turnover (Chirkina & Khavenson, 2018; Zullig et al., 2010). A review of school climate research suggested that the idea of school began when researchers started applying the concept of organizational environment studies using schools as an organization (Zullig et al., 2010). Researchers were trying to understand if invisible factors such as school norms and expectations were correlated with student outcomes (Zullig et al., 2010). They found that school climate was positively linked to discrepancies between achievement outcomes (Zullig et al., 2010). The impact of school climate was significant even when controlling for demographic influences such as SES and ethnicity (Zullig et al., 2010). The social culture of schools became a focus for investigation as some studies found that how students felt about themselves, in their school social environment, was the best predictor for student achievement (Zullig et al., 2010).

In the 1980s researchers emphasized the impacts of relationships on school climate. It was suggested that differences in academic achievement between public schools and private schools were due to superior school climate at private schools (Chirkina & Khavenson, 2018). The school climate in private schools was elevated by trusting relationships between parents, teachers, and students (Chirkina & Khavenson, 2018). In addition to school values and norms, researchers were considering the effect of both parents' and teachers' interactions with the



school on shaping school climate. As school climate research progressed through the 1990s, researchers began to branch out and there was a larger focus on individual classes and teachers within a school instead of the school as a whole (Zullig et al., 2010). For schools where students spent the majority of their time with one teacher, such as in typical elementary schools, it may be more accurate to assess school climate as individual classrooms instead of the school as a whole (Zullig et al., 2010). Additionally, school climate research in the 1990s emphasized the relationship between school climate and student academic achievement (Chirkina & Khavenson, 2018). Building off of the 1980s theory that higher academic achievement in private schools was because of school climate, 1990s researchers began to investigate if academic achievement was associated with school climate in all schools (Kreft, 1993). This research often compared the climates of schools that were “effective” and “ineffective” in supporting academic achievement (Hoy & Hannum, 1997). After noting the trend that school climate was associated with academic achievement, investigators wanted to understand what specific factors of school climate were related to school climate and how those factors could be defined (Hoy & Hannum, 1997).

In more recent decades, school climate research has continued to examine academic achievement as well as other factors related to educational success such as student dropout, bullying, and post-secondary enrollment (Lee & Burkam, 2003; Waasdorp et al., 2011). Furthermore, researchers have branched out to investigate the relationship between school climate and non-academic factors. For example, school climate has been associated with student self-esteem, behaviour, mental health, and the development of social skills (Aldridge & McChesney, 2018; Cohen et al., 2009). Researchers have also found significant variances in ratings of school climate for groups of individuals within the same school. For example, students who belong to different racial groups can have notably different experiences of school climate

within the same school (Bottiani, et al., 2014; Voight et al., 2015). Voight and colleagues (2015) found that Hispanic and Black middle school students had more negative views of their school climate than their White peers. Additionally, teachers and students within the same school can also report markedly dissimilar perceptions of school climate (Ramsey et al., 2016; Waasdorp et al., 2011). When comparing student and teacher perceptions, studies found that students and teachers can have dissimilar feelings of connectedness with their school, with teachers reporting a greater sense of belonging within the school. This may be because teachers have greater control over the schools they decide to work in whereas students generally have little control over what school they attend (Ramsey et al., 2016). Moreover, students have significantly lower feelings of safety than teachers in the same school (Ramsey et al., 2016; Waasdorp et al., 2011). Waasdorp and colleagues (2011) theorized that teachers may witness similar instances of bullying as students but it may not affect their feelings of safety as significantly. Teachers are adults and authority figures in schools so they may not feel as threatened by student bullying behaviour as students who may feel they will become a target for bullies. These results suggest that teachers and students can have decidedly different perceptions of their school environment.

Lately, researchers have drawn more attention to the methodological inconsistencies in school climate research (Berkowitz, et al., 2017). The definition of school climate has changed over the decades, and there is still no fully agreed upon definition. Adding to the confusion, measures of school climate are often created for individual studies based on requests from the school districts (Gage, et al., 2016). These measures are rarely tested for reliability and validity and are not always appropriate for replication studies in other schools (Gage, et al., 2016). Moving forward, school climate researchers should use measures that have a foundational basis of statistical reliability and validity. In addition, the questions used should be focused on the

general components of school climate and not district specific questions so they can be applicable for most schools. Using more consistent measures that are reliable and valid will help encourage replication in the field.

School climate research published in English journals often comes from studies conducted in the United States. Although it is useful for researchers in Canada to have access to this data, there can be challenges with comparing America studies to schools in Canada. The United States and Canada are close geographically and have many similarities but they can differ in school policies and culture. School climate findings in the United States may not be representative of school climate for Canadian schools and students. Studies from the United States can help inform our understanding of school climate, but it is important to recognize that they might not be directly comparable to what we are seeing in Canada.

### **Theoretical Framework of School Climate**

Although agreeing on an exact definition of school climate has been a challenge, integrative reviews of the literature have highlighted the key components for understanding school climate (Cohen et al., 2009; Thapa et al., 2013; Zullig et al., 2010). The basis of school climate is the quality and character of school life (Cohen et al., 2009). It reflects the goals, norms, and values of the school as well as the interpersonal relationships, teaching practices, and organizational structures (Cohen et al., 2009). A well-developed, positive school climate promotes child and adolescent development and learning that is necessary for students to be successful (Cohen et al., 2009). Simultaneously it fosters a feeling of security and social, emotional, and physical safety for all members of the school (Cohen et al., 2009). All members of the school environment contribute to maintaining the climate, but it is also affected by external factors such as the community, school district, and region in which the school is located

(Cohen et al., 2009). Parents, teachers, students, and administrators all contribute to the school environment and they all experience it in different ways (Gage et al., 2016).

Similar to the complications with establishing an exact definition for school climate, there is no universal consensus on all of the dimensions of school climate. Through reviews of school climate literature, researchers have indicted some dimensions of school climate that are considered to be essential (Cohen et al., 2009; Thapa et al., 2013; Zullig et al., 2010). The essential dimensions of school climate are safety, teaching and learning, relationships, and school connectedness (Cohen et al., 2009; Thapa et al., 2013; Zullig et al., 2010). These dimensions are sometimes divided further into more specific subcategories for use in school climate measures. In early stages of school climate research, physical components of the school environment (e.g., adequate space and cleanliness) were the main focus for school climate measures (Thapa et al., 2013). More recently, physical aspects of schools have become less prominent in school climate research as understanding and addressing the invisible dimensions including teacher support, feelings of safety, and respect for diversity in schools is believed to be more effective for school improvement (Bryk et al., 2010). Parental involvement is additional factor that is sometimes included in measures of school climate (Gage, et al., 2016). Parents' involvement in their child's education can contribute to their child's development, learning, and success at school (Berkowitz et al., 2017). Parents' attitudes towards schools and support of their child's academics can influence students' motivation and engagement in school (Berkowitz et al., 2017; Thapa et al., 2013).

### ***Safety***

Safety is an essential dimension of school climate because whether students feel safe at school strongly impacts their school experience (Thapa et al., 2013; Voight & Nation, 2016). If

students feel that their school is unsafe, they are more likely to bring weapons to school, avoid specific areas of the school, or avoid school altogether (Hughes et al., 2015; Lenzi et al., 2017). If students are not attending school because they feel unsafe it can negatively impact their academic achievement and social relationships (Hughes et al., 2015). School safety is not only concerned with physical safety but with social and emotional safety as well (Cohen et al., 2009). Threats to school safety can include physical, verbal, emotional, or digital harassment, bullying, or violence (Voight & Nation, 2016). The prevalence of digital abuse or cyber bullying has increased as technology has advanced and students have greater access to the internet and social media (Ferrer-Cascales et al., 2019). Although this form of peer victimization occurs online, it still impacts student's perceptions of school climate (Ferrer-Cascales et al., 2019). Students' feelings of safety can vary based on what demographic groups they belong to and the schools level of diversity (Vitoroulis et al., 2016). For example, students who are members of the LGBTQIA+ community experience higher rates of bullying and harassment than their non-LGBTQIA+ peers (Gower et al., 2018). A school climate's respect for diversity can impact students' feelings of safety at schools (Voight & Nation, 2016). Establishing school safety is a critical prerequisite for learning (Bryk, 2010). Understanding students' perspectives on safety is imperative because teachers and school staff can have markedly different perspectives on feeling safe within the same school (Waasdorp et al., 2010).

### ***Teaching and Learning***

A positive school climate promotes collaborative learning, trust, group-cohesion, and respect for others (Cohen et al., 2009). Teachers and school staff play an important role in defining and demonstrating norms, values, and goals that help shape school climate (Thapa et al., 2013). When teachers incorporate lessons on conflict resolution, communication, and empathy

into the curriculum it can be effective in creating a more positive social environment in the classroom (Voight & Nation, 2016). In general, teacher practices can affect student behaviours (Martinez et al., 2016). Teacher practices guide students on school behaviours through rules, demonstrations, and reinforcements. For example, schools that use positive behavioural supports, such as positive reinforcement for desired behaviour, have shown decreases in problematic student behaviours (Solomon et al., 2012). This suggests that when students are rewarded for behaviours desired by the school, students may be less likely to engage in problematic behaviours because they are not being reinforced. In one study, teachers' ability to effectively manage classroom instruction and encourage learning was associated with positive student social behaviours (Martinez et al., 2016). Having clear and consistent rules and expectations in the classroom may minimize disruptive student behaviours (Martinez et al., 2016). It is important for teachers to provide students with support and structure within the classroom (Voight & Nation, 2016). When teachers set clear expectations for behaviour while promoting mutual respect between themselves and their students it can positively effect school climate (Voight & Nation, 2016). If students understand the expectations of them in the classroom and feel that they are respected by their teachers they may feel more positively about their teachers and their experience at school as a whole. In contrast, if students feel like they are being treated unfairly by teachers they may not feel respected at their school and may not feel comfortable in their classroom. How teachers manage their classrooms can shape student learning and can influence student academic outcomes (Martinez et al., 2016; Thapa et al., 2013). Teachers who consistently enforce rules and focus on instruction can reduce barriers to learning such as distractions and disruptive behaviours (Martinez et al., 2016). Reducing barriers to learning may help students become more engaged in class which may lead to better academic outcomes

(Martinez et al., 2016). In addition to instruction and classroom management, teachers can positively influence student ratings of school climate by showing students that they care about them (Voight & Nation, 2016). Talking to students about their concerns about school, providing them with a rationale for what they are learning, and acknowledging their efforts can help students feel more positively about school (Voight & Nation, 2016). Overall, how teachers conduct their classes and interact with students can greatly impact students' feelings towards their school. Understanding students' perspectives on how teachers support them is an essential aspect of school climate.

### ***Relationships***

Relationships are a fundamental aspect of school climate because they create a sense of connectedness and belonging in school and strongly influence how individuals experience their school environment (Thapa et al., 2013; Voight & Nation, 2016).

**Student-Teacher Relationships.** Teachers can play an important role in adolescents' adjustment to new schools (Wentzel, 2002). Student-teacher relationships increase students' feelings of connectedness within their school (Voight & Nation, 2016). When students develop a mentor-mentee relationship with a teacher, they are more likely to feel respected and cared about at school which leads to more positive perceptions of school climate (Voight & Nation, 2016). Quality student-teacher relationships can help students feel more accepted at their school (Civitillo et al., 2021). For example, strong student-teacher relationships may reduce some of the negative effects that ethnic discrimination in secondary schools may have on minority students (Civitillo et al., 2021). Furthermore, perceived ethnic discrimination at secondary schools had less of a negative impact on student engagement when students felt like they had a quality relationship with their homeroom teacher (Civitillo et al., 2021). In addition to increasing

feelings of belonging, student-teacher relationships can influence student academic outcomes. Positive student-teacher relationships have been associated with higher academic achievement in students (Berkowitz et al., 2017; Wentzel, 2002). When students have a good relationship with their teacher, they may feel more motivated to exhibit prosocial behaviour in class and achieve academically (Wentzel, 2002). Perhaps unsurprisingly, supportive student-teacher relationships have also been associated with decreased levels of behavioural problems and student dropout (Lee & Burkam, 2003; Thapa et al., 2013). Students' relationships with their teachers influences how connected they feel with their school climate and how motivated they are to succeed in school.

**Student-Peer Relationships.** Students' peer relationships are another key component for understanding school climate. Peer relationships play a key role in student engagement with school (Li et al., 2011). Students who felt they had high levels of peer support were more academically engaged in school and cared about their school (Li et al., 2011). Conversely, students who were bullies and reported that their friends get into trouble at school were less academically engaged (Li et al., 2011). Having positive relationships with peers could reduce the risk of bullying in schools and cyberbullying (Ferrer-Cascales et al., 2019). For example, an intervention study focused on building peer relationships between adolescent classmates while teaching them interpersonal and conflict resolution skills to aid them in maintaining positive relations (Ferrer-Cascales et al., 2019). The results of this study found that students who received the peer relationship intervention reported a significant reduction in bullying behaviour, peer victimization, fighting, cyberbullying behaviour, and cybervictimization (Ferrer-Cascales et al., 2019). Additionally, after receiving the peer relationship intervention students had a significant improvement in their ratings of school climate (Ferrer-Cascales et al., 2019). This intervention



suggests that positive peer relationships may help reduce the risk of multiple types of bullying and improve students' perceptions of their school climate.

Furthermore, positive peer relationships in school are thought to be key contributors to positive mental health (Oberle et al., 2014). Students who felt like they belonged in a peer group at school were more likely to feel optimistic about their lives (Oberle et al., 2014). Positive peer relationships within a classroom may be a source of resilience for adolescents struggling with mental health (Madjar et al., 2016). A more positive peer climate within classrooms could act as a protective factor for non-suicidal self-injury for adolescents (Madjar et al., 2016). In one study, a more positive peer climate (e.g., students enjoy doing things with each other in school activities, students get to know each other well) was related to fewer non-suicidal self-injuries reported for high school students (Madjar et al., 2016). Madjar and colleagues (2016) believed that positive peer relationships in the classroom could be a source of resilience for high school students. Overall, how students interact with their peers at school can have significant impacts on their feelings about themselves and their school. Peer relationships are an important aspect of school climate because they shape students' experience of school.

### ***School Connectedness***

School connectedness concerns students' feelings of being valued, accepted, respected, and included in their school (Shochet et al., 2006). It is an important component of school climate and has been correlated with academic motivation and achievement (Cohen et al., 2009; Shochet et al., 2006). Student mental health has also been related to school connectedness (Cohen et al., 2009; Shochet et al., 2006). One study found that school connectedness had a strong negative correlation with symptom of anxiety and depression and deficits of general functioning (Shochet et al., 2006). Respect, acceptance, and inclusion are important values for

fostering school connectedness and a positive school climate in diverse schools. In schools that have a Gay Straight Alliance (GSA), members of the GSA felt more comfortable speaking up against discrimination because of their membership (Mayberry et al., 2013; Voight & Nation, 2015). When students are given the opportunity to identify school problems and work towards solutions, they have a more positive impression of their school climate (Voight & Nation, 2015). To nurture feelings of school connectedness in culturally diverse schools, it is important that all students feel equally respected and included within their school (Bottani et al., 2014). Additionally, cultural inclusiveness and equitable treatment of students may positively influence their academic engagement (Bottani et al., 2014). In contrast, schools that have not fostered a feeling of respect and acceptance for all students tend to have lower levels of school connectedness, which ultimately affects student motivation and achievement (Shochet et al., 2006). For example, Black students' perceptions of discrimination and differential treatment by school staff is thought to be associated with decreased academic engagement and achievement (Bottani et al., 2014). Understandably, students who do not feel valued, accepted, respected, and included in their school are likely to have more negative attitudes towards school and be less academically motivated (Bottani et al., 2014). Students thoughts on school connectedness influences how they feel about their school and their academic motivation and achievement.

Cultural competence in schools can play a role in students feeling comfortable and connected to their school environment. Cultural competency in schools is the ability of the organization, through their faculty and staff, to function effectively in cross-cultural situations (Ngo, 2008). School staff should have the knowledge, skills, and attitudes to interact with people of different cultures and school policies should address cultural diversity in school climate (Ngo, 2012). School staff need to actively work towards cultural competency some attitudes and

behaviours can be culturally destructive (Bustamante et al., 2009). Training in cultural competency can also help teachers feel more confident when working with students from different cultures (He, 2013). Cultural competency in schools can be especially important for supporting ELL students (Ngo, 2012). An Alberta study of school cultural competence investigated ELL students' and their parents' perspectives of cultural competency in their school (Ngo, 2012). Ngo found that both ELL students and their parent's rated their schools as mediocre in most areas for cultural competency. Furthermore, students and parents felt that schools performed poorly in providing culturally focused services to support families and noted that schools failed to involve them in developing plans to promote learning about their culture (Ngo, 2012). Overall, school staff should work to establish cultural competency through policies, staff training, and promoting cultural diversity in school climate (Ngo, 2012). It is important for schools to be culturally competent so all students can feel accepted and connected within their school.

### ***Parent Involvement***

Parents' connection and engagement with their child's school also has an impact on school climate (Berkowitz et al., 2017; Thapa et al., 2013). Parents' relationship and engagement with the school can also contribute to their child's development, learning, and success at school (Berkowitz et al., 2017). For high school students, multiple aspects of parental involvement can influence their academic engagement and achievement. Although parental involvement has been repeatedly linked to student academic achievement, the specific contributing parental behaviours have not been clearly defined (Jeynes, 2007; Shukla et al., 2015). Common factors of parental involvement measured in research include homework involvement, academic support, parenting style, and parental expectations (Al-Alwan, 2014; Jeynes, 2007; Núñez et al., 2015; Shukla et al.,

2015). Parental involvement is a complex construct, and while many studies look at parental involvement as a whole, others focus on a singular aspect. Similar to the issues in school climate research methodology, there is no agreed-upon standard of what questions should be asked to determine parental involvement. A meta-analysis of parental involvement components found that parental expectations, parental style, and parental involvement as a whole were all related to student academic achievement (Jeynes, 2007). A different study focused specifically on parental involvement in homework which is one of the more common forms of parental involvement related to schools (Núñez et al., 2015). Núñez and colleagues (2015) found that parental involvement in their child's homework was associated with academic achievement in students in elementary, middle, and high school. This study split homework involvement into two groups: parental support and parental control. *Parental support* consists of three aspects of homework support for their children: inquiring if their children need help, offering help if asked, and providing useful help for homework (Núñez et al., 2015). *Parental control* is when parents keep track of their children's homework completion, withhold fun activities until homework is completed, and punishing children if they do not do all of their homework (Núñez et al., 2015). Parental support in homework involvement had a significant positive association with student academic achievement in all three school levels (Núñez et al., 2015). In contrast, parental control in homework involvement had a significant negative association with student academic achievement in all three school levels (Núñez et al., 2015). Núñez and colleagues (2015) reported a direct link between parent involvement in homework and student achievement, with the important distinction of type of parental involvement. While Núñez and colleagues looked at a direct association with parent involvement and academic achievement, other researchers have questioned if the relationship between parent involvement and academic achievement is better

understood with an indirect influence. Al-Alwan (2014) proposed that parental involvement influences academic performance indirectly through its effects on school engagement. They found that parental involvement had a direct effect on student engagement and student engagement had a direct effect on academic achievement (Al-Alwan, 2014). Other researchers have been interested in the association with parental involvement and academic motivation (Ricard & Pelletier, 2016; Shukla et al., 2015). Shukla and colleagues (2015) found that parental support was positively associated with students' academic motivation. More specifically, parental support for learning was associated with student goals for mastery and performance in academics (Shukla et al., 2015). Parental support also had a positive relationship with students' persistence in mathematics through academic motivation (Shukla et al., 2015). Although many studies focus on parental support for learning when considering academic impacts, other types of parental support may be relevant. Research by Ricard and Pelletier (2016) investigated parent support for basic psychological needs of their children. They found that parent support for basic psychological needs (e.g. parents encourage children to be themselves, parents show interest in their children's lives) was a significant positive predictor for student academic motivation and a significant negative predictor of student high school dropout (Ricard & Pelletier, 2016). This suggests that the more students felt that their parents supported their basic psychological needs, the less likely they were to drop out of high school (Ricard & Pelletier, 2016). Overall, the literature has demonstrated that various components of parental involvement are associated with student academic success, both individually and combined. How exactly parent involvement influences student academic achievement remains undetermined but direct and indirect effects have been considered. Considering parental involvement on student engagement, academic achievement, and high-school dropout, it is considered a factor of school climate.

### *Interconnectedness of School Climate dimensions*

Safety, teaching and learning, relationships, parental involvement, and school connectedness are essential components of school climate, but they are not independent concepts. There is significant overlap between these dimensions. For example, how connected students feel with their school depends on if they feel valued, respected, and included which can be influenced by their relationship with their teacher which can be influenced by how teachers manage their classes. To reduce overlap for dimensions, measure include factors to address the concepts with reduced cross-loading (Gage, et al., 2016). For example, an Adult Support at School as a factor can inquire about student relationships with teachers and staff, teacher practices, feelings of respect and fairness, and students' feelings of connectedness.

### **School Climate Measures**

One of the key limitations of school climate research is how many different measures are used (Zullig et al., 2010). Measures of school climate are often developed for a specific school district and are not tested for statistical reliability (Gage et al., 2016; Olsen et al., 2018). The district-specific questions and lack of reliability testing make it difficult to conduct replication studies utilizing those measures (Olsen et al., 2018). Inconsistencies in measures can cause additional problems for researches conducting systematic reviews and meta-analyses because the methods and results are more difficult to directly compare (Berkowitz et al., 2017). To aid schools and researchers in finding a consistent and reliable measure, a recent review of school climate measures was conducted (Olsen et al., 2018). Olsen and colleagues (2018) searched for measures in peer-reviewed journals that were developed to specifically measure school climate. They only included measures that were easily accessible and were based upon the most

commonly used definition of school climate in research (Olsen et al., 2018). The definition they used was “School climate refers to the quality and character of what goes on in schools. It is based on students’, parents’, and school personnel’s perceptions of school life and is valued as a representation of “norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (Olsen et al., 2018, p. 155). Olsen and colleagues (2018) only included measures that were able to be used in multiple levels of schools (elementary to high school) and had undergone statistical analysis reporting reliability scores of .60 or higher. Finally, the review highlighted four instruments that were considered to be scientifically sound and comprehensive measures of school climate (Olsen et al., 2018). The four instruments selected by Olsen and colleagues (2018) were: (a) *Comprehensive School Climate Inventory* (National School Climate Center, 2002), (b) *School Climate Assessment Instrument* (Alliance for the Study of School Climate, 2004), (c) *California School Climate, Health, and Learning Survey* (West Ed, 2014), and (d) *Meriden School Climate Survey* (Gage et al., 2016). See Table 1 for a detailed comparison of the four measures. Though these measures developed school climate factors based on a similar definition, they use slightly different constructs to measure the interconnected dimensions of school climate. The Comprehensive School Climate Inventory (National School Climate Center, 2002) was developed over several years and measures factors of school climate such as teaching and learning, safety, interpersonal relationships, and general needs of the school (Olsen et al., 2018). The School Climate Assessment Instrument (Alliance for the Study of School Climate, 2004) was developed to give schools a clear picture of where they are and assesses appearance and physical environment, faculty relations, discipline environment, learning environment, attitude and culture, student interactions, and school-community relations (Olsen et al., 2018). The California School

Climate, Health, and Learning Survey (West Ed, 2014) was originally designed to assess risky behaviours in transitional years (i.e., when children switch schools from elementary to middle school or middle to high school). However, it expanded to overall school climate and can be used in grades 3-12 to measure health risks (e.g., alcohol and drug use), school climate, school violence, resilience and youth development, and physical health (Olsen et al., 2018). Finally, the Meriden School Climate Survey Student Version (Gage et al., 2016) assesses adult support at school, school safety, respect for differences, adult support at home, academic support at home, aggression toward others, and peer support. While these instruments measure school climate in different individual factors they all encompass the essential dimensions of school climate. Moreover, they are easy to find and have been tested for statistical reliability which makes them a good choice for schools and researchers (Olsen et al., 2018). Moving forward, choosing measures that address the fundamental dimensions of school climate, and have statistical reliability, will be crucial to furthering the field because they allow for study replication and comparison.



**Table 1.***Comparison of School Climate Measures*

| Instrument  | Purpose   | Grades available  | Length   | Reliability  |
|---|---|---|--|--|
| Meriden School Climate Survey Student Version (Gage et al., 2016)                     | To assess (a) adult support at school, (b) school safety, (c) respect for differences, (d) adult support at home, (e) academic support at home, (f) aggression toward others, and (g) peer support  | One version used for grades 3-12  | 38 questions (approximately 15 min to complete)  | Full scale reliability 0.91. Subscale reliability ranges 0.69-0.90.  |
| Comprehensive School climate inventory (National School Climate Center, 2002)         | To assess (a) safety, (b) teaching and learning, (c) interpersonal relationships, and (d) needs of school.  | Two versions: Grades 3-5 & Grades 6-12  | Both versions have 64 questions (approximately 20 min to complete)   | Full scale reliability 0.94 for Grades 3-5 & 0.95 for Grade 6-12   |
| School Climate Assessment Instrument (Alliance for the Study of School Climate, 2004) | To assess (a) appearance and physical plant, (b) faculty relations, (c) student interactions, (d) leadership/decision making, (e) discipline environment, (f) learning environment, (g) attitude and culture, and (h) school community relations. | Two versions: Grades 2-6 & Grades 6-12  | Grades 2-6: 30 questions<br>Grades 6-12: 79 items (approximately 20 min to complete)                                   | Full scale reliability 0.97. Subscale reliability ranges 0.73-0.96   |
| California School Climate, Health and Learning Survey (West Ed, 2014)                 | To assess (a) health risks (e.g. alcohol, tobacco and other drug use); (b) school violence, (c) physical health, (d) resilience and youth development, and (e) school climate.  | Three versions: Grades 3-6, Grades 7-8, Grades 9-12 (Specifically designed for use in grades 5, 7, 11 to determine risk behaviours) | Grades 3-6: 65 questions<br>Grades 7-8: 100 questions<br>Grades 9-12: 112 questions (approximately 30 min to complete) | Grades 3-6: reliability for Environmental Resilience Factors 0.34-0.71 & Internal Resilience Factors 0.36-0.63<br>Grades 7-12 reliability for Environmental Resilience Factors 0.74-0.90 & Internal Resilience Factors 0.73-0.85 |

*Note.* Adapted from “A Review and Analysis of Selected School Climate Measures” by J. Olsen, A. I. Preston,

B. Algozzine, K. Algozzine, and D. Cusumano, 2018. *The Clearing House*, 91(2), 47–58. p. 51-52

(<https://doi.org/10.1080/00098655.2017.1385999>)

## **Impact of School Climate**

Although the various effects of the individual factors of school climate have been addressed in previous section, an overview of the general impacts often demonstrated in the literature will be reviewed here. The most consistently researched and reported impact of school climate is academic achievement (Berkowitz et al., 2017; Cohen et al., 2009; Thapa et al., 2013). Higher ratings of school climate are associated with higher levels of student academic achievement (Berkowitz et al., 2017; Cohen et al., 2009; Thapa et al., 2013). This association has been demonstrated for elementary, middle, and high school (Thapa et al., 2013). Understandably, if students feel respected, supported, safe, and encouraged to learn it creates a nurturing environment for academic success (Cohen et al., 2009). Furthermore, a positive school climate can potentially mediate the negative effects that low SES has on academic achievement (Berkowitz et al., 2017). For students from low SES, a positive school climate can increase academic success beyond the predicted negative impacts of low SES (Berkowitz et al., 2017). For all students, a positive school climate has been associated with positive student attitudes toward school and increased academic productivity (Berkowitz et al., 2017; Bryk, 2010). The effects of school climate can continue to impact students beyond their time in K-12 schools (Knight & Duncheon, 2020). A positive school climate in high school increases students' likelihood of enrolling in and continuing through post-secondary education (Knight & Duncheon, 2020).

School climate can also influence non-academic factors of school success. Positive student ratings of school climate have been associated with lower rates of student absenteeism and student dropout (Lee & Burkam, 2003; Thapa et al., 2013). Decreased aggressive and increased prosocial student behaviours have also been connected to positive school climate

(Aldridge & McChesney, 2018; Thapa et al., 2013). Positive student perceptions of school climate have been also linked to increased prosocial behaviours (e.g., being kind to classmates, helping others) and decreased risky behaviours for students (e.g., drug use, self-harm: Aldridge & McChesney, 2018). Moreover, positive school climates have been related to lower suspension rates, less violent behaviours, and less harassment of other students (Thapa et al., 2013).

In addition to academic achievement and in-school behaviours, school climate has been related to personal factors for students that extend beyond school walls. One of the most notable personal impacts of school climate is on student mental health (Aldridge & McChesney, 2018; Thapa et al., 2013). Schools are a big part of adolescents' lives and they are a place where they can socialize and build relationships. Teachers and peers can provide emotional support and a sense of belonging for many students. Positive relationships with teachers and peers at school have been associated with decreased rates of student mental health difficulties and risky behaviours (e.g., self-harm, suicidal ideation; Aldridge & McChesney, 2018). Other factors of school climate have also been related to student mental health. High student ratings of school safety are related to diminished prevalence of mental health issues and increased ratings of psychological wellbeing (Aldridge & McChesney, 2018). High ratings of school safety may be because students do not feel that they will be hurt or bullied (Waasdorp et al., 2010). Furthermore, a feeling of connectedness within a school can be associated with student mental health (Aldridge & McChesney, 2018). Students' feelings of school connectedness were also linked to decreased frequency of mental health problems such as anxiety, depressive symptoms, negative body image, and negative thoughts (Aldridge & McChesney, 2018). School climate as a whole has also been related to student mental health. Positive student ratings of school climate have been associated with lower levels of self-reported drug use and depressive symptoms in

students (LaRusso et al., 2008). While these studies do not claim that school climate is a causal factor in student mental health, it is important to consider that the relationship does exist and school climate may play a role in student mental health.

Finally, although most studies focus on the influences of positive school climates, negative school climates are also impactful. Schools with negative school climates have significantly higher rates of chronic absence in their student population (Van Eck et al., 2017). Certain groups of students can also have a more negative perception of their school than non-group members. For example, LGBTQIA+ students often have a more negative view of their school climate and subsequently lower academic outcomes and self-esteem (Kosciw et al., 2013). Similarly, students of different races can experience distinct differences in their school climate (Voight et al., 2015). In some schools, Black and Hispanic students had a more negative experiences of safety, connectedness, opportunities for participation, and relationships with adults than White students (Voight et al., 2015). In school climate research, it is crucial to consider negative perceptions of school climates and how some groups of students may have different experiences. While school climate research has considered some student subgroup differences, diversity research in school climate is still limited. There is a notable lack of research on ELL student populations, especially in high school environments. Many high schools have ELL students but the research has not reflected their perceptions of school climate.

### **Importance of School Climate Research**

As previously mentioned, school climate can have a substantial influence on students' lives both within and beyond school. It is important to research school climate to better understand how different aspects affect students. Historically, most student-focused school climate research has looked at the student population as a whole. More recently researchers have

begun to investigate subsets of the student population to understand differences in perceptions of school climate (Kosciw et al., 2013; Voight et al., 2015). Researching school climate helps us appreciate strengths and limitations of schools and educational systems and can help highlight areas for improvement (Bryk, 2010). What we learn from school climate research could be used to guide teaching and administrative policies for school improvement (Bryk, 2010). School climate research has demonstrated that teachers and curriculum are not the only factors in student success. Student success, not only in academics but in various areas of school and personal functioning, is heavily related to students' experience of the school environment. By addressing vulnerabilities in school climate, schools can create the environments to facilitate learning. Fostering a positive school climate is likely to increase students' academic achievement by improving their whole school experience as they are tightly interconnected. School climate includes various aspects of school environment which helps us understand the strengths and limitations of how schools are supporting students. When schools address the problem of student achievement alone, they are likely to adequately address the problem because fail to address all of the contributing factors. By addressing the factors related to school climate, they are more likely to see improvement academic achievement and student well-being (Bryk, 2010). Understanding student perspectives' of school climate provides critical information on what schools are doing well and where they can advance. Recognizing that different groups of students may have divergent perspectives on school climate provides an opportunity to address potential inequities.

### **Understanding English Language Learner Students**

An English Language Learner (ELL) is an individual whose native language is a language other than English who is currently learning English. ELLs have diverse cultural and

ethnic backgrounds and can be Canadian born or may have moved to Canada. Some ELL students moved to Canada as a refugee while others may have moved for economic reasons. ELL students begin school with varying levels of English abilities, and some may start elementary school as an ELL while others may not have school in English until high school. There is significant diversity within the ELL student population, but they share a common goal of learning English. In schools, ELLs are tasked with both increasing their English proficiency as well as learning and demonstrating their knowledge of the academic curriculum. In addition to language and academic curriculum, ELL students must understand and adhere to the cultural norms of the school (Wassell et al., 2010). In most schools, cultural norms are not explicitly taught, so ELL students may feel anxious trying to adhere to norms they are not familiar with (Wassell et al., 2010). ELL students begin attending English schools with varying levels of English language abilities and exposure to English. Although ELL students may have some ability to communicate in English, they often lack the skills necessary for understanding academic language in English. When considering language proficiency in students, it is important to recognize different types of English competence (Cummins, 1981). Cummins proposed two modes of language for understanding ELL proficiency: communicative language and academic language (1981). Generally, communicative language is used for social conversations, communicating needs, and general functioning outside of school. Academic language is “the language of school” and is used for understanding the subject matter and completing reading and writing assignments (Roessingh, 2016, p.67). Basic Interpersonal Communication Skills (BICS) develop faster and consists of high frequency words, basic reading and writing, concrete concepts, and conversational language (Roessingh, 2006a; Roessingh, 2016). BICS are contextualized in the “here and now” or “lived experience” and these language

skills develop from immersion and interaction with English (Roessingh, 2006a; Roessingh, 2016). Cognitive Academic Language Proficiency (CALP) is information focused and involves academic words, technical use of words, abstract concepts, and academic reading and writing skills (Roessingh, 2006a; Roessingh, 2016). CALP takes more time to develop and is learned from direct and explicit instruction (Roessingh, 2016). Schools generally strive to support ELL students to gain CALP so they can be successful in academic environments. In schools that are considered successful in teaching ELL students English, oral proficiency takes 3-5 years to develop and academic English proficiency takes 4-7 years (Hakuta et al., 2000). ELL students are placed in an arduous position where they are expected to learn English to academic proficiency while simultaneously studying the curriculum and balancing all other aspects of student life.

Many published studies of ELL students come from American research. These studies can be beneficial for understanding perspectives of ELL students but they may not be wholly representative of ELL students' experiences in Canada. Often ELL students are newcomers and Canada and the United States have different immigration policies which may influence ELL students' perspectives and experience at school. Furthermore, there has been some debate about how each country's official policies influence citizen's attitudes toward immigration (Abu-Laban, & Garber, 2005). It can be challenging to compare attitudes towards newcomers in Canada and the United States because of the differences in experiences and immigration policies. Ultimately, there may be differences in school experiences for ELL students in Canada when compared to the United States. The findings from research with ELL students in the United States can be useful for gaining a background understanding of ELL student research, but the findings may not be fully representative of ELL students' experiences at schools in Canada.

## **Barriers to Educational Success for English Language Learner Students**

With the demands of learning English and learning a curriculum in English, high school can be a challenge for ELL students. If they are performing poorly in classes, it can be difficult for teachers to determine if they are struggling because of language, course content, or both (Callahan, 2005). It can be hard for teachers to properly support ELL students if they are unsure where the root of the difficulty lies. Teachers who instruct ELL can face additional challenges such as lack of adequate ELL specific training and course materials (Cho & McDonnough, 2009). Lack of support for ELL teachers and ELL students creates educational barriers to learning. With these barriers, it is not surprising that ELL students generally demonstrate lower levels of academic achievement than their non-ELL peers (Callahan, 2005). Although though it is logical to attribute lower academic achievement directly to language barriers or inadequate materials there are other compounding factors that layer barriers to success (Hoff, 2013; Kanno & Cromley, 2013). Factors such as ethnicity, low-SES, and teacher expectations can also influence ELL students' academic success (Callahan, 2005; Callahan et al., 2009; Hoff, 2013; Kanno & Cromley, 2013). How schools view and treat ELL students impacts their academic success and overall school experience (Callahan et al., 2009; Gandara & Orfield, 2010).

ELL students are often separated from non-ELL into different classes and curriculum tracks (Callahan, 2005; Callahan et al., 2009; Gandara & Orfield, 2010). Which academic track ELL students are placed in has been related to academic achievement and access to post-secondary education (Callahan, 2005; Callahan et al., 2009; Gandara & Rumberger, 2009). ELL programs that excessively segregate ELL students from their non-ELL peers can be detrimental (Gandara & Orfield, 2010). High segregation of ELL students can impact students' academic achievement as well as their social and emotional development (Gandara & Orfield, 2010).



When ELL students are segregated from non-ELL students for many of their classes, they miss the opportunity to engage in casual and academic conversations with their native English speaking peers (Gandara & Orfield, 2010). This can be detrimental for ELL students because they may not have many other opportunities outside of school to spend time conversing with someone fluent in English (Gandara & Orfield, 2010). In addition to fewer language opportunities, segregated ELL students may also have less access to more academic classes (Gandara & Orfield, 2010). Extensive segregation of ELL students can also lead to stigmatization of being a ELL (Gandara & Orfield, 2010). In these situations ELL students often report feeling inferior to their non-ELL peers and may have lower perceptions of their intelligence and lower school motivation (Gandara & Orfield, 2010).

Sociodemographic contexts of schools have also been related to the educational success of ELL students (Callahan et al., 2009). ELL students in schools with low ELL populations do worse academically than those in high ELL population schools (Callahan et al., 2009). This difference may be due to lack of resources for ELL students, inadequate teacher education, or less of a focus on ELL students' success (Callahan et al., 2009). Ultimately, English fluency is not the only driver of ELL students' success, and so it is vital that schools consider environmental factors such as teacher perceptions, school support, and school safety.

### **School Environment Impacts for English Language Learner Students**

While supportive and accepting school environments are beneficial for all students' academic achievement, ELL students particularly benefit because feeling comfortable and supported allows them to practice their English without fear of making mistakes (Szpara & Ahmad, 2007). Fear and anxiety can be common feelings for ELL students when they are at school (Wassell et al., 2010). ELL students are sometimes afraid to speak in class because they

fear being laughed at or made fun of for their imperfect English (Wassell et al., 2010). Furthermore, they may feel anxious at school because they do not fully understand the culture and expectations in the classrooms or in the school as a whole (Wassell et al., 2010). If teachers adequately support ELL students it can greatly improve their school experience (Szpara & Ahmad, 2007). One way teachers can support ELL students is by establishing the precedent that making mistakes is a part of learning and that students will not be teased when they make mistakes. Teachers who facilitate a socially supportive classroom, where ELL students are comfortable asking questions, aids students in learning the academic content and supports them in practicing their social communication in English (Szpara & Ahmad, 2007).

Unfortunately, teachers can hold biases about ELL students that can impact their educational experience (Garcia et al., 2019; Riley, 2015). In one study of teachers' perceptions of elementary school students' executive functions, teachers from various schools rated ELL students significantly differently from non-ELL students (Garcia et al., 2019). Students executive functioning was assessed in the areas attention, inhibitory control, cognitively flexibility, and working memory using individually administered assessments conducted by a research assistant, and their results were grouped together to create an overall measured score of executive functioning (Garcia et al., 2019). Teachers were also asked to rate each of their students executive functioning skills (Garcia et al., 2019). Researchers then controlled for students' measured executive functioning abilities when looking at the relationship between teachers' perceptions of student executive functions and demographic characteristics such as being an ELL (Garcia et al., 2019). After controlling for measured executive function abilities, teachers had significantly worse perceptions of executive functioning for ELL students than non-ELL students (Garcia et al., 2019). These findings suggest that teachers generally perceived ELL students as

having poorer executive function abilities than non-ELL students regardless of their actual measured scores of executive functioning (Garcia et al., 2019).

Race, ethnicity, and ELL status can also influence teacher's perception of students' academic abilities (Riley, 2015). A Canadian study on teacher discrimination found that teachers' racial, ethnic, and language biases influenced what academic level program they recommended for students (Riley, 2015). In this study, 21 teachers were given record cards of fictional Grade 7 students that described a student's academic history from Grades 4 to 7 and included their name, gender, if they had taken ELL classes or if they received government funding for Indigenous status (Riley, 2015). The fictional record cards were designed so there were cards with identical academic achievement history but differed on ELL status, Indigenous funding, gender, and name (Riley, 2015). Teachers were then asked to recommend which program (e.g., Supplementary Learning Assistance, Regular Grade Eight Program, or Rapid Advance Program) students should be placed in and to explain their decision (Riley, 2015). Approximately half of the teachers demonstrated a racial, ethnic, or language bias by placing students who had identical grades but differed in Indigenous or ELL status in different academic programs (Riley, 2015). Furthermore, many of the teachers made comments or asked questions about ELL or Indigenous fictional students that were likely because of racial, ethnic, or language biases (Riley, 2015). For example, high grades for non-ELL students were silently accepted, but some teachers questioned the accuracy of high grades for ELL students and wondered if teachers were being generous when grading ELL students (Riley, 2015). The same teachers who doubted high grades by ELL students did not question the accuracy of low grades by ELL students (Riley, 2015). Combining the results of all teachers, more ELL students were placed in the lowest academic program than non-ELL students even though they had record cards with the

same grades (Riley, 2015). Social behavioural characteristics such as shyness or low self-esteem were sometimes assigned to the fictional ELL students with one teacher stating “some of these children don’t have a lot of self-esteem, the ESL students.” (Riley, 2015, p.671). Some teacher made comments about the “strong work ethic” of ELL students who had high grades and a Chinese or Korean sounding name (Riley, 2015, p.667). The same teachers did not make similar remarks on ELL students with high grades and names that suggested a Middle Eastern ethnicity indicating that racial or ethnic biases may have influenced some teachers’ perceptions of ELL students both positively and negatively (Riley, 2015). Overall, when teachers were asked to base their placement recommendations solely on academic achievement, many teachers’ recommendations were influenced by a students’ language, race, or ethnicity (Riley, 2015). The results of this study suggest teachers hold biases based on race, ethnicity, or language status that can influence their perceptions of students and may effect objectivity on academic decisions.

The same school can feel different for students who belong to different sociodemographic groups. Research on immigrant students, many of whom are ELLs, found that students rated their school as less safe and supportive than non-immigrant peers (Crosnoe, 2005; Watkins & Melde, 2009). Although school climate is associated with various aspects of student success, there is scarce research that focuses on ELL students perceptions of their school climate. Most ELL research focuses on English proficiency and academic achievement while overlooking the potential influences of the broader school environment. School climate can impact student academic achievement and a recent study demonstrated that relationship within an ELL student population (Sanders et al., 2018). Sanders and colleagues (2018) found that positive ratings of school climate were associated with higher achievement in math and English for ELL students. Of note, this study did not control for English proficiency for ELL students which may have

impacted their scores (Sanders et al., 2018). By focusing primarily on English proficiency and literacy in relation to academic achievement, researchers are missing the potential effects of the school environment.

### **Current Study**

To better appreciate ELL students' experiences with school we assessed their perceptions of their school climate. By understanding their perceptions of school climate we can improve school climate to positively influence ELL students' school experience and academic achievement. Currently, ELL students face numerous barriers to academic achievement (Callahan, 2005; Callahan et al., 2009; Hoff, 2013; Kanno & Cromley, 2013). Limitations in ELL programs including teacher biases, teacher training, and excessive ELL program segregations can affect the content they learn in school and their access to and success within post-secondary education (Callahan, 2005; Kanno & Cromley, 2013; Kanno & Varghese, 2010). Understanding ELL student perceptions of school climate could help inform school strategies for ELL program improvement. It is a disservice to ELL students to only focus on language abilities and literacy when considering academic achievement. English proficiency, while important, is not the only factor that influences ELL students' education and school success (Kanno & Cromley, 2013). Furthermore, ELL students deserve equitable school treatment and experience as their non-ELL peers. Significant differences in perceptions of school climate have been reported in minority students (e.g., racial minority) but have not been investigated in ELL students (Voight et al., 2015). It is vital to understand ELL students' perspectives on school climate to recognize if there are disparities from non-ELL students. In order to strengthen ELL students' experiences we must first distinguish any potential weaknesses. Research on ELL programs often use teacher perceptions or academic markers to determine areas for

improvement. Although these methods have their merits, it is also important to recognize ELL students' perceptions of their school experience. Evaluating ELL students' perspectives on school climate helps us understand how safe, supported, and respected they feel when at school. Comparing ELL and non-ELL students' reports of school climate allows to perceive any inequities that may be influencing their school experience.

Canada is a diverse country and with plans for steady immigration it will increasingly be home to people with a variety of ethnicities, cultures, and first languages. In 2016, approximately 78% of newcomers that immigrated to Canada reported that their first language was not English or French (Chavez, 2019). In addition, 62% of newcomers to Canada in 2016 spoke a language other than English or French when at home (Chavez, 2019). Canada is home to many ELLs, and their populations are likely to increase as immigration to Canada increases. At school, ELL students face many unique challenges that can make academic success difficult. It is important to investigate potential challenges further to better understand how schools can improve. It is vital for schools to properly support ELL students so they have greater success in school and more opportunities in the future.

This is a preliminary study that aims to explore the perceptions of school climate for ELL students in two Calgary high schools. There has been very limited research on this topic in Canada, so this study aims to begin the exploration of ELL students' perspectives of school climate. Because of the preliminary nature of the research, there were some limitations in methodology and participant recruitment. Data for this study was collected from a larger study that was not focused on ELL students and so ELL specific demographic data was not collected. Furthermore, there was a small sample of ELL participants which limits the conclusions that can

be made. Although there are limitations, a preliminary research study allows us to test new ideas and build a foundation for future research in the area.

### ***Research Aims & Hypotheses***

This research project investigated student perceptions of school climate from ELL and non-ELL high school students. Students were surveyed from two demographically similar high schools and GPA was also collected to evaluate its relationship with school climate.

*Primary Aim:* To understand if there is a difference in perceptions of school climate between ELL students and non-ELL students.

*Hypothesis:* There will be a difference in perceptions of school climate for ELL students and non-ELL students. ELL students will have lower ratings of school climate than non-ELL students.

*Secondary Aim:* To understand if GPA is related to school climate in ELL and non-ELL students.

*Hypothesis:* GPA will be related to school climate in both ELL and non-ELL students. Higher ratings of school climate will predict higher GPA for students in both groups.

## Chapter III: Methods

### Study Design

The primary purpose of this research was to understand if there were differences in how high school students perceived their school climate based on if they were fluent in English or if they were an English Language Learner. This study used a quantitative cross-sectional group comparison study design comparing English Language Learners and non English Language Learners. Survey data was collected from adolescents (Grades 10-12) in two Calgary high schools with a large population of English Language Learners as part of a larger educational neuroscience study. The larger study examined the impact of educational neuroscience professional development for teachers on both teachers and students in a number of areas (e.g., school climate, well-being, teacher self-efficacy, etc.). Data from this study were collected for the baseline of the larger study. Grade Point Average (GPA), gender, race, first language, and perception of school climate data were collected from all participating students in an attempt to better understand the relationship between student language and perception of school climate. The Meriden School Climate Survey Student Version (MSCS-SV) was used as a self-report measure to gather student perceptions of school climate.

### Ethics

Ethics approval for research and analysis of collected data was obtained from the University of Calgary (Ethics Certificate number REB20-1163). Ethics approval for the following research has been reviewed by the Conjoint Faculties Research Ethics Board (CFREB) at the University of Calgary.

Written informed consent was obtained from parents/guardians of participants under 18 years of age. Online assent was obtained from participants before they could access the survey.



Participants over the age of 18 provided online written informed consent before they were given access to the survey. Participants were able to exit the study at any time if they did not want to continue.

### ***Potential Risks to Participants.***

There were minimal risks to participants, but they may have felt bored or uncomfortable while completing the online survey. Participants were able to end the survey at any time, if they did not wish to continue, or skip any questions they felt uncomfortable answering. Individual student results were not shared with teachers, staff, or other students at the school. A list of resources was provided to students, including school staff that they could contact if they felt distressed. No students reported that they felt distressed during or after completing the survey.

### **Participants**

Participants in this study were students from two participating high schools that consisted of grades 10-12. Inclusion criteria for participation: all students attending these schools were invited to participate in the study if their parents consented or if they were 18+ and consented themselves. Students whose parents consented were also invited to assent prior to participating in the study. There were no additional exclusion criteria.

### ***Recruitment***

Students grades 10-12 were recruited from two high schools in Calgary, Alberta with similar demographic compositions of approximately 50% ELL students. The schools sent a letter home to parents of students explaining the study, student participation, and consent for their child. If parents consented for their child to participate they sent the consent form back to the school. The schools provided the link to the survey to students who had consent from their parents or were 18 years of age or older.

**Informed consent.** When accessing the survey link, students 18 years or older were provided with an informed consent page that outlined the voluntary nature of participation, study details, procedure, potential risks and benefits, and researcher contact information. If they consented by clicking the box indicating “I consent” they were redirected to the survey. If they did not consent by clicking the box indicating “I do not consent” they were redirected to an exit page. Students under 18 that had parents’ consent were asked to assent on a similar webpage that outlined the voluntary nature of participation, study details, procedure, potential risks and benefits, and researcher contact information and were asked if they assented to participate. If they indicated yes, then were re-directed to the survey. If they indicated no, they were redirected to an exit page. After starting the survey, students could exit the survey at any time if they did not wish to continue.

### **Data Collection**

The data used for this study was obtained as part of a larger study (REB20-0581). The larger study focused on educating teachers on the cognitive neuroscience of adolescents. The educational neuroscience study collected student data to see how the educative intervention for teachers impacted both teachers and students. Student demographic data was collected as well as ratings of school climate, mental health, executive functioning, and academic motivation. Because of the large ELL student population in the schools, the current study was proposed as an opportunity to use the data already collected. Information used as a part of this study included gender, race, grade point average, first language, language fluency, and the Meriden School Climate Survey.

Data was collected as part of an online self-report survey using Qualtrics software (Qualtrics, Provo, UT) and was stored on a secure online server at The University of Calgary.

The secure online server was password protected and could only be accessed by approved users through the university network. Students were given time during school hours to access and complete the questionnaire.

For the larger educational neuroscience study, school-based demographic data collection including current grade, final course grades, postal code, and student absences were collected by the school and sent to the research team. Only current grade and final course grades were used for the purpose of this study. Student GPA was calculated by averaging all final course grades. The school-based data was matched with survey-based data by individual student number.

### **The Meriden School Climate Survey**

Participants completed The Meriden School Climate Survey-Student Version (MSCS-SV) as a part of their online survey (Gage & Larson, 2013). Although the definitive definition of school climate is debated, it is generally thought of as the quality and character of school life (Cohen et al., 2009). It encompasses the patterns of students' school experience including norms, values, goals, teaching, interpersonal relationships, and organizational structure (Gage et al., 2016; Thapa et al., 2013). School climate also considers students' feelings of safety at school and their relationship with adults in schools (Bear et al., 2011; Gage et al., 2016). The MSCS-SV development was informed by the research of Thapa and colleagues (2013), Cohen and colleagues (2009), and the National Center on Safe and Supportive Learning Environments as well as the influence of New England's school districts (Gage et al., 2016). In addition to the essential dimensions of school climate, the MSCS-SV also explore home-school connection (Gage et al., 2016). The MSCS-SV is a 38-item scale that measures students' perceptions of school climate. It includes seven factor constructs: Adult Support at School, School Safety, Respect for Differences, Adult Support at Home, Peer Support, and Aggression Toward Others

See Table 2 for a full list of questions within factors. Factor loadings ranged from .42 to .78 suggesting that the items were saturated to each construct (Gage et al., 2016).

Items on the MSCS-SV use a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*. The online survey takes approximately 15 minutes to complete and is written at a grade 3.9 reading level making it accessible for most high school students even if English is not their first language (Gage et al., 2016). Additionally, during administration of the survey for this study, teacher support was provided for any students who needed it. Preliminary research of the MSCS-SV indicated evidence of acceptable reliability and validity based on principal component analysis and confirmatory factor analysis (Gage et al., 2016). Reliability scores ranged 0.69-0.90 for MSCS-SV subscales (Gage et al., 2016). Many school climate surveys are created for individual school and are based The MSCS-SV was tested on an ethnically diverse population, and there were no significant differences between group scores on any factors (Gage et al., 2016).

**Table 2.***The Meriden School Climate Survey-Student Version Questions*

| Question Number                    | Factor 1: Adult Support at School   |
|------------------------------------|---|
| 30.                                | There are teachers in my school who help me to really want to learn                         |
| 25.                                | The teachers in my school make learning fun   |
| 42.                                | My school handles student behavior problems fairly  |
| 40.                                | The adults in my school treat students with respect   |
| 37.                                | The adults in my school treat all students fairly   |
| 26.                                | I am happy to be at this school   |
| 43.                                | At school, there is a teacher or other adult who listens to me when I have something to say |
| 36.                                | At my school, there is a teacher or other adult who tells me when I do a good job           |
| 7.                                 | At my school, there is a teacher or other adult whom I can trust                            |
| 3.                                 | There are teachers at my school who care about me   |
| 21.                                | I try to do my best at school   |
| Factor 2: School Safety            |   |
| 33.                                | Other students in school hurt my feelings   |
| 24.                                | I feel sad in school  |
| 35.                                | Other students at school have spread mean rumors or lies about me                           |
| 34.                                | I get hit or threatened by other students   |
| 22.                                | I worry about many things   |
| 2.                                 | I feel safe at school   |
| 23.                                | I feel safe on my way to and from school  |
| Factor 3: Respect for Differences  |   |
| 45.                                | A person's skin color can cause problems at my school                                       |
| 39.                                | Students being mean to other students (harassment) is a problem in my school                |
| 32.                                | There is physical fighting between students at my school                                    |
| 31.                                | At school, the color of my skin can get me in trouble                                       |
| 10.                                | Students in my school respect differences in other students                                 |
| Factor 4: Adult Support at Home    |   |
| 18.                                | At home, I have a parent or other adult who always wants me to do my best                   |
| 11.                                | At home, I have a parent or other adult who cares about my school work                      |
| 8.                                 | At home, I have a parent or other adult who expects me to follow school rules               |
| 12.                                | In the future, I feel I will be successful in life  |
| Factor 5: Academic Support at Home |   |
| 44.                                | At home, if I need help with homework, a parent or adult will help me                       |
| 38.                                | At home, I have a quiet place to do my homework   |
| 47.                                | At home, I have a parent or other adult who listens to me when I have something to say      |
| 41.                                | At home, I have time to do my homework  |
| Factor 6: Peer Support             |   |
| 19.                                | I have a friend about my own age who talks with me about my problems                        |

14. I have a friend about my own age who really cares about me
5. At my school, I have a friend who I can really trust
9. When I have a problem, I find someone to talk with

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Factor 7: Aggression Towards Others

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27. During the past few months, I have hit or pushed other students at school in anger
  46. During the past few months, I have hit, pushed, or spread mean rumors at the bus stop or on the bus
  28. During the past few months, I have spread mean rumors or lies about other students
- 

## Data Analysis

Students were divided into two groups based on their first language and fluency in English. Students who reported a first language other than English and stated that they were not fluent in speaking, reading, and writing in English were placed in the ELL group. Students that selected English as their first language or reported that they were fluent in speaking, reading, and writing in English were placed in the non-English Language Learner (non-ELL) group. The term non-ELL has been used instead of English as a first language to be more inclusive of multilingual students.

### *Statistical Software*

Statistical Analysis was performed using IBM SPSS Statistics, Version 26 (IBM Corp. Released 2019. IBM SPSS Statistics for Macintosh, Version 26.0. Armonk, NY: IBM Corp.).

### *Data Cleaning*

**Missing Demographic Data.** Raw data was visually inspected for missing values such as student identification number, first language, and student grades. Student identification number was essential to match survey data to student GPA as well as to match the responses to the parental consent forms. Participants with missing data in student number, first language, and student grades were removed using listwise deletion. Listwise deletion was used because imputation of student number and first language was not possible and these values were essential

for data analysis. Listwise deletion was used for student grades as to not interfere with interpretation of analyses that used GPA data.

**Missing MSCS-SV Data.** Little's Missing Completely at Random test was conducted to determine if data from the MSCS-SV was missing completely at random. There was a significant value found suggesting that data was not missing completely at random. Data from the second half of the survey was missing significantly more often than data from the first half of the survey. The MSCS-SV data was visually inspected for missing data and visual inspection showed that the majority of missing data was from participants who did not fully complete the survey. Survey data was missing because some participants did not complete any of the MSCS-SV, and others completed only the first half of the survey. It is likely that data was not missing completely at random because some participants only completed the first half of the survey and no participants only completed the second half of the survey. Listwise deletion was used to remove participants with missing MSCS-SV. Listwise deletion was used because most of the participants with missing data had a large portion of their data missing so multiple imputation would be problematic for interpretation of analyses.

### ***Study Aims***

*Primary Aim:* To understand if there is a difference in perceptions of school climate between ELL students and non-ELL students.

*Hypothesis:* There will be a difference in perceptions of school climate for ELL students and non-ELL students. ELL students will have lower ratings of school climate than non-ELL students.

*Secondary Aim:* To understand if GPA is related to school climate in ELL and non-ELL students.

*Hypothesis:* GPA will be related to school climate in both ELL and non-ELL students. Higher ratings of school climate will predict higher GPA for students in both groups.

### ***Multivariate Analysis of Covariance***

To determine if there is a difference in perceptions of school climate for ELL and non-ELL students a Multivariate Analysis of Covariance (MANCOVA) was performed. Student groups (ELL and non-ELL) were used as the independent variables (IV) and the seven factors of the MSCS-SV (Adult Support at School, School Safety, Respect for Differences, Adult Support at Home, Academic Support at Home, Peer Support, Aggression Toward Others) were used as dependent variables (DV). To investigate any potential differences in school climate for students from different schools, school was added as a fixed factor. Finally, GPA was added as a covariate to control for any differences from academic achievement.

Assumption testing for MACOVA was performed before the analysis to ensure that requirements were met. Assumptions were all met; the assumptions used for MANCOVA are listed below.

1. Independent random sampling was used to collect data. All students at the schools were invited to participate in the study.
2. Level and measure of the variables were appropriate for the analysis. Categorical variables were used for IV and continuous variables were used for DVs. A continuous variable was used for the covariate.
3. Absence of multicollinearity of DVs. A correlation matrix was run to determine the correlation of DVs. Dependent variables do not have a correlation above  $r=.90$  thus there was an absence of multicollinearity.



4. Multivariate normality is present in the data. Histograms were visually inspected for severe deviations from normality. Additionally, the sample size was large enough that the sampling distribution is relatively normal because of the central limit theorem.
5. Variance between groups is equal. Variance was tested using Box's M Test and Levene's Test of Equality of Error Variances to check for non-significant outcomes.

### ***Multiple Regression***

Two linear multiple regressions were performed to determine if there was a relationship between student perceptions of school climate and GPA for ELL and non-ELL students. Participants were split into ELL and non-ELL groups for separate analyses. The seven MSCS-SV factors (Adult Support at School, School Safety, Respect for Differences, Adult Support at Home, Academic Support at Home, Peer Support, Aggression Toward Others) were used as IV to predict GPA as the DV. Assumptions testing for multiple linear regression such as linear relationship, normality, and absence of multicollinearity were performed. Linearity was tested through visual inspections of scatter plots, linearity was met if variables showed random distribution. Normality was tested through visual inspect of histograms. Multicollinearity was tested through the use of a correlation matrix to ensure correlation coefficients were less than .80.

## Chapter IV: Results

### Demographics

There were 167 participants in the sample with 123 from School 1 and 44 from School 2. There were 38 students in the ELL group and 129 students in the non-ELL group. Participant demographic variables will be summarized here in their respective groups, ELL students or non-ELL students.

### *English Language Learner Students*

**School & Grade.** Participants were all from two high schools with grades 10-12. The majority of ELL students came from School 1 (n=25, 65.0%) with approximately one third from School 2 (n=13, 34.2%). From both schools, there were 12 students in Grade 10 (31.6%), 17 students in Grade 11 (44.7%), and 9 students in Grade 12 (23.7%).

**Gender.** The ELL group participants' gender was split mostly between female (55.3%) and male (42.1%). One participant chose the option *prefer not to say*. The options included for gender were male, female, non-binary, *prefer not to say*, and *prefer to identify as* with a blank space to fill in their gender identity.

**Race.** On the survey the race options given were Indigenous/Metis, Asian, Black or African, Hispanic or Latino, Pacific Islander, White or *prefer not to say*. Students were able to select as many options as they felt represented them. For statistical purposes, participants were classified as Mixed Race if they selected two or more options. The vast majority of ELL students identified as Asian (71.1%). Other student races represented were Hispanic/Latino (10.5%), Black/African (7.9%), and Mixed Race (7.9%). One participant chose the option *prefer not to say*.

**First Language.** Nine languages were reported as a first language for ELL student participants. The most common first language reported was Tagalog (46.7%). Other first languages included Malayalam (13.3%), Bisaya (10.0%), Ilocano (6.7%), Spanish (6.7%), Vietnamese (6.7%), Filipino (3.3%), Kankanaey (3.3%), and Visayan (3.3%). Eight students in the ELL group indicated that their first language was not English or French but did not specify their first language.

### ***Non English Language Students***

**School & Grade.** The non-ELL participants were from the same two high schools with grades 10-12. The majority of non-ELL students came from School 1 (n=98, 76.0%) with approximately one quarter from School 2 (n=31, 24.0%). Over both schools, there were 50 students in Grade 10 (38.8%), 48 students in Grade 11 (37.2%), and 30 students in Grade 12 (23.3%).

**Gender.** The non-ELL participants' gender was split mostly between female (48.8%) and male (45.0%). A smaller percentage of students identified as non-binary (3.1%) or preferred to identify as an option not listed (3.1%). The options included for gender were male, female, non-binary, *prefer not to say*, and *prefer to identify as* with a blank space to fill in their gender identity.

**Race.** On the survey the race options given were Indigenous/Metis, Asian, Black or African, Hispanic or Latino, Pacific Islander, White or *prefer not to say*. Students were able to select as many options as they felt represented them. For statistical purposes, participants were classified as Mixed Race if they selected two or more options. The most common race identity of non-ELL students identified as Asian (48.8%). Other student races represented were White (16.3%), Black/African (13.2%), Mixed Race (10.9%), Hispanic/Latino (6.2%),

Indigenous/Metis (2.3%), and Pacific Islander (1.6%). One participant chose the option *prefer not to say*.

### **Analysis for Primary Aim**

*Primary Aim:* To understand if there is a difference in perceptions of school climate between ELL students and non-ELL students.

*Hypothesis:* There will be a difference in perceptions of school climate for ELL students and non-ELL students. ELL students will have lower ratings of school climate than non-ELL students.

A multivariate analysis of covariance was conducted to determine if, after controlling for GPA, there were significant differences between groups (ELL or non-ELL, School 1 or School 2) on seven factors of MSCS-SV (Factor 1: Adult Support at School, Factor 2: School Safety, Factor 3: Respect for Differences, Factor 4: Adult Support at Home, Factor 5: Academic Support at Home, Factor 6: Peer Support, and Factor 7: Aggression Toward Others). Prior to analysis assumptions were evaluated and revealed no violations with the exception of homogeneity of variance for Factor 7: Aggression Toward Others. Factor 7 had a  $p$ -value of .006 on Levene's Test of Equality of Error Variances suggesting that the assumption of homoscedasticity was violated. Given this violation, results pertaining to Factor 7 should be interpreted with caution. The analysis revealed a significant main effect of the ELL vs. non-ELL group,  $F(7, 156) = 2.67$ ,  $p = .012$ , Wilks'  $\lambda = .893$ ,  $\eta^2 = .107$ . However, there were no significant group differences within any MSCS-SV factors for ELL vs. non-ELL. Student School and GPA demonstrated non-significant effects on the model. See Table 3 for more details.

**Table 3.***MANCOVA Differences in MSCS-SV for School and ELL Status*

| Effect          | Wilk's<br>Lambda | F        | df | p-value | $\eta^2$ |
|-----------------|------------------|----------|----|---------|----------|
| Intercept       | .004             | 5905.208 | 7  | .001    | .996     |
| School          | .949             | 1.206    | 7  | .302    | .051     |
| ELL vs. non-ELL | .904             | 2.376    | 7  | .025    | .096     |

**Analysis for Secondary Aim**

*Secondary Aim:* To understand if GPA is related to school climate in ELL or non-ELL students.

*Hypothesis:* GPA will be related to school climate in both ELL and non-ELL. Higher ratings of school climate will predict higher GPA for students in both groups.

Participants were split into groups, ELL students and non-ELL, and two multiple regressions were performed. For ELL students, a linear multiple regression was performed to test if the seven factors of the MSCS (Factor 1: Adult Support at School, Factor 2: School Safety, Factor 3: Respect for Differences, Factor 4: Adult Support at Home, Factor 5: Academic Support at Home, Factor 6: Peer Support, and Factor 7: Aggression Toward Others) predict GPA. Prior to analysis, assumptions were evaluated and revealed no violations with the exception of the distribution of residuals. The P-P plot for the model suggested that the assumption of normality for residuals may have been violated. Only extreme deviations from normality are likely to significantly influence results, but minor violations should be noted nonetheless. Results of the multiple linear regression indicated that the 7 MSCS factors were not significant predictors of GPA for the ELL group. The results of the regression indicated that the model explained 6.2% of the variance and that the model was a not significant predictor of GPA scores,  $F(7, 30) = 0.285$ ,  $p = .96$ . See Table 4 for more for further details.

**Table 4.***Multiple Regression MSCS-SV and GPA for ELL Students*

| Variables | $\beta$ | p-value |
|-----------|---------|---------|
| Factor 1  | -.218   | .318    |
| Factor 2  | -.004   | .987    |
| Factor 3  | -.005   | .981    |
| Factor 4  | .134    | .624    |
| Factor 5  | -.041   | .881    |
| Factor 6  | .159    | .422    |
| Factor 7  | .025    | .896    |
| $R^2$     | .062    |         |

For non-ELL, a linear multiple regression was performed to test if the seven factors of the MSCS-SV (Factor 1: Adult Support at School, Factor 2: School Safety, Factor 3: Respect for Differences, Factor 4: Adult Support at Home, Factor 5: Academic Support at Home, Factor 6: Peer Support, and Factor 7: Aggression Toward Others) predict GPA. Prior to analysis assumptions were evaluated and revealed no major violations. Results of the multiple linear regression indicated that together the seven MSCS-SV factors were not significant predictors of GPA for the non-ELL group. The results of the regression indicated that the model explained 6.2% of the variance and that the total model was a not significant predictor of GPA scores,  $F(7, 119) = 1.119$ ,  $p = .66$ . See Table 5 for more for further details.

**Table 5.***Multiple Regression MSCS-SV and GPA for non-ELL Students*

| Variables | $\beta$ | p-value |
|-----------|---------|---------|
| Factor 1  | .053    | .680    |
| Factor 2  | .025    | .849    |
| Factor 3  | -.056   | .638    |
| Factor 4  | .086    | .491    |
| Factor 5  | .188    | .136    |
| Factor 6  | -.067   | .525    |
| Factor 7  | -.060   | .530    |
| $R^2$     | .062    |         |

Although the overall model was non-significant, Factor 4: Adult Support at Home and Factor 5: Academic Support at Home showed significant correlations with non-ELL student GPA. For exploratory purposes, two separate linear regressions were run to see if individually Factors 4 and 5 could predict GPA. The results of the Factor 4 linear regression indicated that the model explained 3.7% of the variance and that the model was a significant predictor of GPA scores,  $F(1, 125) = 4.748$ ,  $p = .031$ . This regression suggests that student perceptions of their Adult Support at Home is a significant predictor of their GPA score. Greater perceptions of Adult Support at home predicts higher GPA scores for non-ELL students. The results of the Factor 5 linear regression indicated that the model explained 4.9% of the variance and that the model was a significant predictor of GPA scores,  $F(1, 125) = 6.393$ ,  $p = .013$ . Higher ratings of Academic Support at Home indicated higher GPA scores for non-ELL students.

## Chapter V: Discussion

The primary aim of this study was to investigate any potential differences in high school students' perceptions of school climate (as measured using the MSCS-SV) for ELLs and non-ELLs. Seven factors of school climate were used as a part of the MSCS-SV:

- Factor 1: Adult Support at School
- Factor 2: School Safety
- Factor 3: Respect for Differences
- Factor 4: Adult Support at Home
- Factor 5: Academic Support at Home.
- Factor 6: Peer Support
- Factor 7: Aggression Toward Others

I hypothesized that there would be a significant difference between ELL students and non-ELL students on their scores of school climate for all seven factors. Specifically, I predicted that ELL students would have lower scores of school climate than their non-ELL peers. This hypothesis was partially supported by a significant main effect for a MANCOVA analyzing differences in total school climate ratings for ELL students and non-ELL students. However, there were no significant differences found on individual factors of school climate for ELL students and non-ELL students. Therefore, whether ELL students and non-ELL students have significantly different perceptions of school climate across seven factors remains inconclusive. Further interpretation of these results are detailed later in this chapter.

The secondary aim of this project was to understand if there was a relationship between the seven factors of school climate (as measured using the MSCS-SV) and GPA for ELL and non-ELL students. I hypothesized that higher scores of school climate on all factors would predict a higher GPA for both ELL and non-ELL students. Contrary to my hypothesis, multiple regressions for ELL and non-ELL groups did not demonstrate a significant relationship for all



seven factors of school climate. However, for the non-ELL group Factor 4 (Adult Support at Home) and Factor 5 (Academic Support at Home) indicated a significant positive relationship with GPA in separate linear regressions. Additional interpretations of these results are discussed in this chapter.

### **Potential Differences in School Climate for ELL and non-ELL Students**

The primary aim for this study was to investigate if there are any differences in perceptions of school climate between ELL and non-ELL high school students. I hypothesized that there would be a significant difference in all seven MSCS-SV factor scores for ELL students versus non-ELL. The results of our study found that there was a significant difference between ELL and non-ELL students' perceptions of school climate when all seven factors are considered together. However, within individual factors of school climate, no significant difference between ELL and non-ELL groups was detected. While this may seem contradictory, there are some statistical factors explaining why we found a significant difference for the model as a whole but not for the individual factors. When a MANCOVA is conducted it creates a linear combination of the dependent variables, in this case the seven factors of school climate, and tests to see if there are any differences in that combination between the two independent variables (ELL and non-ELL students). This is the main test where we saw a significant difference. Then the results of the MANCOVA will display any group differences within factors with a univariate test. This is where there were no significant differences between ELL and non-ELL groups. The main effect of the MANCOVA considers the correlation between dependent variables and has greater power for detecting group differences than univariate tests. For our analysis, it is possible that ELL and non-ELL groups only differ significantly when all factors of school climate are considered together. There may not be any significant differences of school climate perceptions

of ELL and non-ELL students on individual factors of school climate. This suggests that ELL students may not report major differences in individual factors of school climate but may still feel differently about their school as a whole. For example, they may not emphasize that they specifically feel unsafe and unsupported at school but they have a more negative impression of their school in general.

It is also possible that there are significant differences between ELL and non-ELL student perceptions of individual factors but our analysis was unable to detect them because our analysis was limited by having a small sample of ELL students which may have impacted our ability to detect differences in univariate analysis. The MANCOVA reported a small effect size for the overall difference between groups. Considering the small effect size the small sample size may not have been able to detect a significant difference in individual factors. In future research, having a larger sample of ELL students would help us understand if differences in perceptions of school climate for ELL and non-ELL student only exists when school climate factors are considered altogether or if differences can be detected within specific factors. Lastly, our samples size for ELL (n=38) and non-ELL (n=129) student were substantially different. Unequal sample sizes can increase type I error rates in MANCOVAs, and so, it is possible that the significant main effect is a false positive and does not exist. Although this result is unlikely because assumption testing was completed, it is still important to consider the possibility of a false positive. Additionally, there was a minor violation in Levene's test for Factor 7 which also slightly increases the chances of a type I error.

Studies investigating ELL high school students' perspectives of school climate are noticeably missing from the literature. This gap in the literature makes interpreting our results in comparison to similar studies challenging. One study examined differences in perceptions of

school climate for ELL and non-ELL elementary school students (Rodriguez et al., 2009). Rodriguez and colleagues (2009) found that perceptions of school climate were similar for ELL and non-ELL elementary school students. While this was the only study found that directly compared ELL and non-ELL student perspectives of school climate, there are some notable distinctions that may account for our differences in outcomes. Rodriguez and colleagues (2009) focused on elementary students and asked only seven questions regarding school climate. Their study failed to report what statistical methods were used to analyze their data (Rodriguez et al., 2009). Rodriguez and colleagues (2009, p. 518) did not conclude that there was not a statistical difference between ELL and non-ELL students but instead stated that the data revealed “virtually no difference in school climate among ELLs and monolingual learners.” Even though Rodriguez and colleagues (2009) had a different outcome than our study, their findings help us better interpret how our results fit within the literature. Our focus was on high school students, and perhaps differences in school climate are more apparent for ELL students in high school. Classes in high school are more academically challenging, and high school students are expected to balance more responsibilities and social expectations. The complexity of high school expectations, both academic and social, may heighten any perceived inequalities in school climate.

Considering the lack of research on ELL students’ assessment of school climate in high school, it is important to broaden our scope for understanding our findings. Our study demonstrated a significant difference in perspectives of total school climate in ELL and non-ELL students. However, our analyses did not determine why there were differences in school climate between the two groups of students. To understand why ELL students had different ratings of school climate we need to consider high school experiences that are unique to the ELL

population. A study of ELL student experiences in high school found that fear was a pervasive component for many ELL students (Wassell et al., 2010). Students reported feeling afraid to speak in class because of their imperfect English abilities (Wassell et al., 2010). Moreover, ELL students indicated a general feeling of anxiety while in school because they did not fully understand the culture of the classrooms or the school as a whole (Wassell et al., 2010). These feelings of fear and anxiety would likely affect perceptions of school safety and security. If teachers are knowledgeable in how to support ELL students they create a safe environment for learning (Szpara & Ahmad, 2007).

Unfortunately, many ELL students have felt that some of their teachers had little understanding or empathy for them or the challenges they were facing (Trickett et al., 2012; Wassell et al., 2010). Research has indicated that many teachers in classes that included ELL and non-ELL student did not have adequate training for teaching ELL students (Cho & McDonnough, 2009; Trickett et al., 2012; Wassell et al., 2010). Further concerns about inadequate teacher training were that some teachers had unrealistic expectations for ELL students and expected them to learn academic English in six months or a year (Wassell et al., 2010). If ELL students have negative teacher experiences (e.g., unempathetic, unrealistic expectations) it would influence their perspectives of both adult support and respect for diversity in their school climate.

ELL students also reported some problems in their relationships with their non-ELL peers (Trickett et al., 2012; Wassell et al., 2010). Lack of empathy was not only experienced from the teachers but from non-ELL students as well (Wassell et al., 2010). Some ELL students reported feeling rejected by their non-ELL peers and noted that they were often excluded from working with other students in the class (Wassell et al., 2010). Consequently, feelings of social isolation

can be a problem for many ELL students in high school (Trickett et al., 2012). Not surprisingly, language barriers and cultural differences can create barriers for ELL students when connecting with their peers (Wassell et al., 2010). Additionally, ELL students can experience discriminatory treatment from non-ELL students (Trickett et al., 2012). ELL students have experienced discrimination for their race, ethnicity, culture, and religion from other students in their school (Trickett et al., 2012). Harmful experiences with peers at school are likely to impact ELL students' ratings of peer support and respect for diversity in their school climate.

ELL students can face many adversities at school but that does not mean that they only have negative experiences of school. It is important not to discount ELL students' positive experiences. Some teachers are dedicated to successfully integrating ELL students into their classes and are considerate of their needs (Trickett et al., 2012; Wassell et al., 2010). Supportive teachers make the effort to ensure ELL students feel safe in the classroom and comfortable practicing their English (Wassell et al., 2010). Teachers who were newcomers themselves often were very caring and went above and beyond to support ELL students (Trickett et al., 2012). For example, one teacher that had immigrated herself would stay afterschool to provide free tutoring for ELL students that needed help (Trickett et al., 2012). Positive experiences with teachers could influence ELL students' ratings of adult support and respect for differences in their school climate. In the classroom, ELL students can form strong friendship with each other and share common school experiences (Trickett et al., 2012). ELL students can form a sense of community together and look out for each other (Trickett et al., 2012). They will often support each other in school by helping with school work (Trickett et al., 2012). Teachers reported that ELL students will often look out for each other and assist their teacher with diffusing tensions in the classroom (Trickett et al., 2012). Forming a supportive community within the school could influence ELL

students' sense of peer support within their school climate. Overall, there are several reasons, both positive and negative, that may contribute to an ELL students and non-ELL students having significantly different ratings of overall school climate. Future research in this areas will be vital to understand where the dissimilarities in school climate are occurring.

### **School Climate Factors' Relationship with Student GPA in ELL and non-ELL Students**

I hypothesized that all factors of school climate would be associated with student GPA for both ELL and non-ELL students. More specifically, higher ratings of school climate factors would predict higher GPA. This hypothesis was based on the literature that school climate has been related to academic achievement in students and that higher ratings of school climate have been associated with higher levels of student academic achievement (Berkowitz et al., 2017; Cohen et al., 2009; Demirtas-Zorbaz, 2021; Thapa et al., 2013). For this study, I investigated if seven factors of school climate predicted GPA in both ELL students and non-ELL students. In our sample, the relationship between school climate and GPA was not significant in the ELL group. In the non-ELL group, the multiple regression including all seven factors was not significant. However, two factors (Factor 4 and Factor 5) had significant correlations with GPA and when run as individual linear regressions they had significant interactions.

### ***Academic Support and Adult Support at Home: Relationship with Student GPA***

In the MSCS-SV, Factor 4 and 5 represent Adult Support at Home and Academic Support at Home respectively. Although these metrics measure factors at home and not at school, parents' connection with their children's school can influence school climate by influencing their child's feelings about school and academic engagement (Berkowitz et al., 2017; Thapa et al., 2013). Factors that inquire about adult and academic support at home are not always included in measures of school climate but were included in the MSCS-SV because the New England school

district was interested in assessing home-school connectedness (Gage et al., 2016; Zullig et al., 2010). Including some indication of home-school connectedness makes sense as strong parent-school-community ties is an essential support for school climate improvement (Bryk, 2010; Sebring et al., 2006). Parent-school relationships are important because parents affect their children's school motivation and set learning and behavioural expectations for them at school (Sebring et al., 2006). Moreover, parents who have strong ties with the school and their community contribute to school improvement through volunteering, fundraising, and voicing their opinions on school decision making (Sebring et al., 2006).

While parents are not often at school with their children, they play a role in their children's school success (Ricard & Pelletier, 2016). Parental involvement is positively related to student motivation, school engagement, and negatively related to high school drop-out rates (Al-Alwan, 2014; Núñez et al., 2015; Ricard & Pelletier, 2016; Shukla et al., 2015). Our study found that higher ratings of academic and adult support at home were related to higher GPAs for non-ELL high school students. Similar to the results in the current study, other studies have found that parent support has been associated with student academic achievement (Alhosane et al., 2017; Jeynes, 2007; Núñez et al., 2015). Intuitively this makes sense, if children need help with schoolwork outside of school, they are likely to go to their parents for assistance. Additionally, parents' expectations about school can influence students' behaviours and academic performance (Jeynes, 2007).

Given the evidence for parental involvement and academic achievement, it is logical that our study found that Adult Support at Home and, Academic Support at Home were predictors of student GPA in the non-ELL group. Although the factors are described as Adult Support at Home and Academic Support at Home they capture similar concepts as parental involvement.

Using the language Adult Support instead of Parental Support allows the survey to be more inclusive of families that have other adults in the home (e.g., grandparents) that offer school support. In the MSCS-SV Factor 4: Adult Support at Home asks questions such as “At home, I have a parent or other adult who always wants me to do my best” and “At home, I have a parent or other adult who cares about my school work.” These questions consider parental involvement concepts such as parental support and parental style. Factor 5: Academic Support at Home asks questions such as “At home, if I need help with homework, a parent or adult will help me” and “At home, I have a parent or other adult who listens to me when I have something to say.” These questions consider parental involvement concepts such as homework involvement and basic psychological support. Our findings of the positive association between Factor 4, Factor 5, and student GPA are consistent with the results of parental involvement and student academic achievement in the literature. Intuitively, the relationship between Adult Support, Academic Support and GPA is understandable. If students have an adult at home to help them with their homework it supports their learning and encourages them to complete their schoolwork. Similarly, if there is an adult at home that wants them to do their best and expects them to follow school rules it is feasible that this will motivate students to work hard at school. Our discoveries that Adult Support at Home and Academic Support at Home are positive predictors of student GPA is consistent with the research on parental involvement and academic achievement.

#### ***Other School Climate Factors and Student GPA in non-ELL Students***

In the non-ELL student group, most factors of school climate (excluding Factor 4 and 5) were not significantly associated with student GPA. These findings were contrary to my hypothesis that all factors of school climate would be positively associated with student GPA.



Even though school climate has been repeatedly linked to academic achievement, there are some potential reasons why we did not see this outcome.

One of the potential reasons why we did not see a significant relationship between general school climate and academic achievement is disparities in methodology. Firstly, differences in school climate measures may have impacted our findings. Many measures of school climate have been used in school climate research on academic achievement (Demirtas-Zorbaz et al., 2021). Although measures share essential dimensions of school climate there can be differences in how they structure their factors and what questions they use. At this point in time, there are no published studies using the MSCS-SV to investigate the relationship between school climate and student GPA. The MSCS-SV is a relatively new scale, and the limited published literature utilizing the scale makes it difficult to make direct comparisons to our study. These comparisons are important to help us understand if our results align with the general consensus of the potential relationship between MSCS-SV and GPA. A speculative possibility is that the MSCS-SV is not a strong predictor of student GPA. With how the MSCS-SV is organized, when the factors are used altogether it may not be a good predictor of school climate. Because there is limited published research on the MSCS-SV and GPA this speculation has not been supported in the research but it is a possibility to consider when understanding our results.

Adding to the methodological inconsistencies, academic achievement can be measured in varying ways (Demirtas-Zorbaz et al., 2021). Our study used student GPA which is a relatively common measure of academic achievement. We calculated GPA by averaging the final grades of all courses taken. Some studies, however, use individual courses or standardized tests as a measure of student academic achievement. The differences in methodologies may contribute to why the outcomes of our study were different to studies with a similar focus.

A recent meta-analysis found that school climate and academic achievement had a significant association but a small effect size (.178; Demirtas-Zorbaz et al., 2021). Small effect sizes typically require a large sample size to detect a significant effect (Sullivan & Feinn, 2012). Our study had 129 students in the non-ELL group which is a decent sample for a study in educational psychology. However, the majority of the studies included the Demirtas-Zorbaz et al. (2015) had over 400 student participants with many having a few thousand participants. It is possible that our sample size was not large enough to detect a significant association between student perceptions of school climate and GPA.

### ***School Climate Factors and GPA in ELL Students***

I hypothesized that all factors of the MSCS-SV would be related to GPA in ELL students. However, the results did not indicate a significant relationship between school climate and GPA in ELL students. The sample size (n=38) of ELL students may not have been large enough to detect a relationship if the effect size of the association is small (Sullivan & Feinn, 2012). It is possible that there is an association between ELL students' perceptions of school climate and GPA, but our sample size may not have been large enough to reveal that difference. While the p-value of the regression was non-significant, the effect size of the multiple regression was slightly larger than the effect size of the linear regressions for the non-ELL group. Considering this, it is possible that the regression model considering all factors of school climate maybe be a better predictor of GPA if the sample size is large enough to detect a significant relationship. Future research with a larger sample size could help clarify these findings. Currently, there is very limited research to compare our findings with. Most studies of school climate and academic achievement use a sample of students in general classes and do not specify if ELL students are included. If ELL students are a part of the larger school climate and academic achievement

research, they are likely grouped with the general language students and are not analyzed as an individual group. One study that did consider ELL students' perspectives as an independent group found that there was a positive association with school climate and academic achievement (Sanders et al., 2018). Sanders and colleagues (2018) found that the relationship between school climate and academic achievement in ELL students was of a similar magnitude as the relationship between school climate and academic achievement in non-ELL students. This finding suggests that school climate may be an equally important factor for the academic success of ELL and non-ELL students. Though Sanders and colleagues (2018) also investigated school climate and academic achievement for ELL students, there are some notable differences in methodology and sample size which may account for their different results. While they examined academic achievement, the focus was specifically on reading and mathematics scores (Sanders et al., 2018). Instead of using GPA as a measure of academic achievement, the researchers used standardized tests for math and reading (Sanders et al., 2018). Moreover, the measure of school climate used by Sanders et al. (2018) had only three factors: safety, teacher expectations, and teacher support. They used high school students in their study but only those in grades 9 and 10 (Sanders et al., 2018). Finally, Sanders and colleagues (2018) had a considerably larger sample size for ELL students ( $n=3,257$ ). Altogether, these differences may contribute to disparate results between our study and Sanders and colleagues (2018). Without more studies focusing on ELL student perceptions of school climate and academic achievement it is difficult to determine if our results are unique or part of a larger trend. In the ELL population, there may be other factors that impact their GPA and supersede school climate's influence. For example, English proficiency may truly be the driving factor in ELL students' academic achievement and may outweigh any impacts of school climate on academic achievement (Ardasheva et al., 2011). In future research,

it will be important to have a larger sample of ELL students to better determine the potential association between school climate and GPA.

## **Implications**

### ***Implications for Research***

Currently, there is very limited research investing ELL student perspectives of school climate. While this study cannot provide definitive answers to why there are differences in perceptions of school climate for ELL and non-ELL high school students, it suggests that differences may exist. This research will hopefully encourage other researchers to pursue studies will ELL students and school climate. Further research in this area could help highlight what the differences in school climate are and eventually why these difference are occurring. Recognizing that school climate can potentially affect ELL students' school experience can broaden the field of ELL research in Canada. With growing numbers of newcomers in Canada each year, as a nation, we need to understand how to properly support them. Many new Canadians are ELLs and it vital to appreciate their perspectives and experiences to understand what supports they may need. Schools help set children up for success in their future and if systemically some groups of students are not receiving the same experience it is important to recognize that. Students deserve equitable treatment in school and fair opportunities for success. Similarly, appreciating that different groups of students at the same school can have a distinct perceptions of school climate emphasizes the importance of diversity research in educational psychology. Diversity research helps us understand how social structures and processes impact diverse groups of students (Bartolo, 2010). Issues with discrimination that minority groups face are best rectified by changes in structure and processes (Bartolo, 2010). Before we can address any potential problems with discrimination in school structures and processes, we must determine what the

issues are. By investigating school climate for different groups of minority students we can better understand how they feel about their school structures and processes. Further research in this area will hopefully identify any areas in school climate that are failing to properly support ELL students. This study begins to address the gap in the literature and hopefully will encourage future interest in ELL students' perspectives of school climate.

### ***Implications for Schools***

High schools staff should aim to provide equitable opportunities to support success for all students. Unfortunately, ELL students have lower rates of high school completion and postsecondary enrollment than their non-ELL peers (Callahan, 2005; Kanno & Cromley, 2013; Kanno & Varghese, 2010). While this is a multifaceted problem without a singular solution, it is important for school administrators and teachers to consider the impact that school climate can have on their students. Knowing that there can be a difference in perspectives of school climate for ELL students can encourage schools to investigate their own climate. If administrators take time to understand how students feel about their school experience they can address any weaknesses in the school climate. It will be of particular importance for schools to investigate how vulnerable groups of students perceive their school climate to ensure that they are providing adequate supports.

**School Administrators.** As Canada increases in cultural and language diversity schools must adapt to support a more diverse array of students. Recognizing that perspectives of school climate can be significantly different for ELL students may encourage school administrators to consider how school processes influence ELL students school experience. It is important for school administrators, both at the district and individual school level, to reflect if policies for ELL students are properly supporting their needs. Research has suggested that programs that

separate ELL students from non-ELL students for most of their classes can be detrimental to ELL students' academic success and personal feelings of worthiness (Gándara & Orfield, 2010). It is important for school administrators to critically evaluate their ELL programs and consider what the research suggests best practices may be. In addition to ELL program structure and policy, school administrators should consider if their teachers and support staff are prepared for working with ELL students. How teachers influence ELL students experience and success has been a common theme present in ELL student research (Gándara & Orfield, 2010; Riley, 2015; Roessingh, 2006b; Szpara & Ahmad, 2007; Wassell et al., 2010). Some studies have emphasized the importance of diversity and ELL-specific teacher training for all teachers working with ELL students (Gándara & Orfield, 2010; Szpara & Ahmad, 2007; Wassell et al., 2010). General diversity training and ELL student specific training can both help teachers understand how to best support ELL students in their classrooms (Riley, 2015; Szpara & Ahmad, 2007; Wassell et al., 2010). School administrators can organize diversity and ELL teacher training for teachers and academic support staff to educate them on best practices for working with ELL students. This type of training is important for all teachers and not only teachers that instruct ELL specific classes. High school teachers in general classes (e.g., science, math, social studies) can benefit from diversity and ELL instructor training because they may have ELL students integrated into their classes.

**Teachers.** Teachers themselves can also benefit from learning that ELL students can have different experiences of school climate than non-ELL students. This may encourage all teachers to learn more about ELL students' experiences and to foster a more supportive environment for all students. One study of Canadian teachers found that many teachers hold conscious or unconscious biases about race, ethnicity, and language status that affected their

decision when determining what classes to place students in (Riley, 2015). Being aware of this type of research may inspire teachers to evaluate how they regard students through their own cultural, racial, and linguistic lenses. Taking time to critically reflect on their potential biases and how their behaviours may be impacting ELL students is an important step for teachers working with ELL students (Riley, 2015). Appreciating that ELL students' experience of school climate can be dissimilar to non-ELL students may embolden teachers to evaluate if their classroom is a supportive learning environment for all students. Best practices for ELL students can be helpful for all students in high school classrooms (Szpara & Ahmad, 2007). Teachers should aim to create a socially supportive classroom where ELL students feel comfortable learning English and academic content while making mistakes (Szpara & Ahmad, 2007). Many ELL students feel uncomfortable speaking in class because they fear that peers will make fun of their English or their accent (Wassell et al., 2010). Teachers should encourage ELL students to participate but not force them if they are uncomfortable; furthermore, teachers should discourage any kind of teasing about students' accents or language abilities (Wassell et al., 2010). To be inclusive of students' languages and cultures, teachers can ask ELL students to teach them how to properly pronounce their names in their native languages (Szpara & Ahmad, 2007). Furthering this idea, teacher can ask students to teach them common phrases in their native language that might be used in the classroom (Szpara & Ahmad, 2007). Demonstrating interest and appreciation for students' native languages can help ELL students feel more valued and accepted as a part of the class (Szpara & Ahmad, 2007). Adult and teacher support at school is an important factor of school climate and creating an environment that is supportive of all students may increases ELL students' impressions of school climate. Working collaboratively with other students can be a

positive learning and social opportunity for ELL students (Szpara & Ahmad, 2007; Wassell et al., 2010).

Group work allows students to discuss ideas and help each other understand with language and academic content (Szpara & Ahmad, 2007; Wassell et al., 2010). Teachers can incorporate group work into their curriculum and assign groups that have both ELL and non-ELL students to encourage collaborative learning (Szpara & Ahmad, 2007; Wassell et al., 2010). Having students work together and help each other can foster a greater acceptance of diversity in the classroom (Szpara & Ahmad, 2007). Peer support and respect for diversity are factors of school climate that could be improved for ELL students by creating collaborative working opportunities with students. Although ELL students are working on learning English, teachers should not force them to only speak English in the classroom (Szpara & Ahmad, 2007; Wassell et al., 2010). When students use multiple languages when learning new content it can help strengthen their language knowledge and course specific skills (Szpara & Ahmad, 2007). Students that speak the same language can help each other clarify meaning when learning new concepts (Wassell et al., 2010). Additionally, when ELL students are forced to only speak English in class they may feel like they are not a valued and respected student in that class (Wassell et al., 2010). Teachers should respect diversity in the classroom and encourage students to support each other in learning. These practices could positively influence ELL students' perspectives of their school climate. Overall, our findings that ELL students perceptions of school climate can differ from non-ELL students may motivate teachers to critically consider how their practices can influence ELL students' experiences within school.

### ***Implications for School Psychologists***



School psychologists work with students who have a wide range of needs, and they must determine how their schools and families can best support them. School psychologists are also advocates for students and should be informed on inequities that diverse groups of students may be facing at school. Appreciating that ELL students can have different perspectives of school climate can provide better context for understanding difficulties ELL students may be facing. Psychologists should recognize that different groups of students may have diverse needs for safety and support at school. Additionally, school psychologists may work with administrators for school improvement. When considering factors for school improvement, psychologists should remember that not all students experience the school climate in the same way. Our research suggests that ELL students may have significantly different experiences of school climate than non-ELL students. Understanding this, school psychologists may consider advocating for school climate improvements while being mindful that there may be student subgroup disparities in perspectives of school climate (Sander et al., 2018). Although they are not ELL specific, there are several evidence-based interventions for improving school climate (Voight & Nation, 2016). One evidence-based school climate intervention that focused on increasing respect for diversity within schools created opportunities for intergroup dialogs for students (Spencer et al., 2008; Voight & Nation, 2016). This intervention created small groups that included students that had varying races, religions, sexual orientations, primary languages, and SES levels and encouraged sharing and discussion while being led by a trained facilitator (Spencer et al., 2008; Voight & Nation, 2016). Students in these groups were also taught active listening and conflict resolution skills so they were prepared to listen to others and discuss their opinions (Spencer et al., 2008; Voight & Nation, 2016). This intergroup discussion opportunity allowed students to share personal experiences related to prejudice, oppression, and privilege

with their peers (Spencer et al., 2008; Voight & Nation, 2016). The results of this intervention found that it increased participants' conflict resolution skills, positive attitudes towards other groups, social awareness, intergroup relations, and likelihood to stand up against discrimination (Spencer et al., 2008; Voight & Nation, 2016). Additionally, after this intervention, there was a significant increase in how often students thought about their primary language which may have made students more aware of challenges that ELL students may face (Spencer et al., 2008).

Utilizing an intervention like this with ELL students and their peers may improve their perceptions of respect for diversity and peer support within their school climate. School psychologists could play a role in facilitating similar intervention in other schools.

School psychologists have a responsibility to educate themselves on diverse populations and should advocate for inclusion and equity within schools. As psychologists, we have an ethical responsibility to have respect for the dignity of all persons and diversity research helps us understand how social structures and processes impact diverse groups of students (Canadian Psychological Association, 2017; Bartolo, 2010). Our research suggests that ELL students may have an unequal perspective of school climate at their schools. While the specific reasons for disparities in school climate ratings are undetermined, it is still important to make an effort to understand ELL students' experiences. Furthermore, school psychologists should want to learn about diverse student experiences and if there are inequities in school systems. Whether through conducting assessments, interventions, or consultations, school psychologists should be able to work respectfully with diverse clients. To prepare school psychologists for working with diverse clients, there has been a push to incorporate diversity and culturally responsive training in school psychology programs (Bartolo, 2010; Lopez & Bursztyn, 2013). Whether or not school psychologists received diversity and culturally responsive training they should seek out literature

and learning opportunities to educate themselves on multiculturalism and diversity. Being aware of perspectives and experiences of diverse students should encourage school psychologists to consider how they regard clients through their own cultural, racial, and linguistic lenses. School psychologist should take time to critically reflect on their potential biases and how their behaviours may be effecting their practice. School psychologists should be competent in understanding the impacts of social environments and potential areas of injustice as well as be advocates for social change (Bartolo, 2010). I hope that this study encourages school psychologists to learn more about ELL students and reflect on any stereotypes or biases that they hold about the ELL population.

### **Limitations**

One of the main limitations of this study was the small sample size of ELL students. The schools where students were recruited reported that approximately 50% of their students were English Language Learners. Nevertheless, the number of ELL students who participated was substantially less than non-ELL students. A potential reason for this was that the consent forms sent home to parent were only in English. Most ELL students have parents who are ELLs as well. Depending on parents' free time and English abilities, the consent form may have been a barrier to their child's participation. Quantitative school climate studies are usually conducted using samples of a few hundred participants as the minimum. Having only 38 ELL students likely affected our ability to detect significant effects.

This studied used data previously collected as a part of a larger study that was not based on ELL students. Because the larger study was not designed to focus on ELL students it did not collect demographic data that would have been beneficial for furthering our understanding of differences within the ELL student population. Information such as if students were Canadian

born or if they were newcomers could help better understand the student population and perspectives of school climate. Furthermore, if students were newcomers understanding how long they had been in Canada and how old they were when they arrived can help provide additional context for understanding results. This study was also limited by the self-report nature of whether students were ELLs. This method did not confirm status with the school and so it relies on students accurately identifying themselves. Additionally, self-report data did not indicate the specific level of language proficiency for ELL students. In future research these demographic variables could help researchers better understand diversity within the ELL student population. This study only considered ELL students as a singular group but more information about the students could help further understanding of potential differences in school climate.

Another limitation of this study is that it was a single time-point cross-sectional design. This type of data only gives a snapshot of how students were feeling at the time of the survey and we cannot make any causation claims about the results. The school climate data used was collected from students at the end of September. At the beginning of the school year students may have a different perspective of school climate than towards the end of the year. Additionally, for Grade 10 students this was their first year at their schools so they may not have had enough time to establish a strong perspective of the school climate. If the study had used school climate ratings collected at multiple time points then we would have better understood how ELL and non-ELL students felt throughout the school year.

A limitation with the data analysis of this study was the inability to use race/ethnicity data as a covariate for ELL and non-ELL perspectives on school climate. Racial disparities have been noted in school climate research (Voight et al., 2015), and it would have been interesting to see if student race had any impact on ELL students perceptions of school climate. Because of the

limited sample size there were as few as two students that identified with some racial identities and as many as 90 students that identified as others. With several racial/ethnic groups and a vastly disparate numbers in many of the groups the data would not have been a valid fit for analyses of ELL students' ratings of school climate.

### ***COVID-19***

Unsurprisingly, the COVID-19 pandemic had an impact on our study and the schools that we were working with. The pandemic greatly changed how schools were operating, and many of the schools resources were diverted to managing the changes. Before the pandemic, the district had agreed to use their translation services to translate the consent forms into a few of the most common languages spoken by their ELL students. With uncertainty and delays caused by the pandemic, the consent forms were never translated, and only English consent form were sent to all families. For survey completion, our research team had planned to visit the schools to assist students with accessing the survey and to answer any questions that they may have had. Because of pandemic restrictions, we were unable to attend the schools and unable to assist with the processes. Both of these limitations likely resulted in lower student participation. More generally, the pandemic caused stress and uncertainty for students and parents. Fewer students were attending schools and restrictions were constantly changing, which may have caused parents and students to feel overwhelmed. In this situation, it is understandable that parents were not motivated to have their children participate in a research project that had no direct benefit to them. Even if their parents consented to participate, students may have not felt compelled to participate or may not have attended school on the day students were given time to participate. Overall, the pandemic was demanding for school staff, students, parents and we were fortunate that the schools were still willing to collaborate with us on our project.

## **Conclusion**

In conclusion, this a unique study investigating the differences in school climate perceptions for ELL and non-ELL students. The results suggest that there is a difference in overall ratings of school climate between ELL and non-ELL students. However, the results of the specific differences remain inconclusive. Future studies with a larger sample of ELL students should be conducted to discover where these differences may lie. The more exploratory aim of this project examined the relationship between school climate factors and GPA for ELL and non-ELL students. Results for ELL students were insignificant but for non-ELL students Adult Support at Home and Academic Support at home were positive predictors of GPA. Hopefully this study will spark interest and encourage additional research in this field. Finally, I hope that this project encourages a greater curiosity for hearing and understanding ELL students' perspectives of their education.

## References

- Abu-Laban, Y., & Garber, J. A. (2005). The construction of the geography of immigration as a policy problem. *Urban Affairs Review* 40(4), 520–561. <https://doi.org/10.1177/1078087404273443>
- Alberta Education. (2009). *High school completion longitudinal study*. Accountability and Reporting Division. <https://files.eric.ed.gov/fulltext/ED507038.pdf>
- Aldridge, J., & McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: A systematic literature review. *International Journal of Educational Research*, 88, 121–145. <https://doi.org/10.1016/j.ijer.2018.01.012>
- Alhosani, A. A., Singh, S. K. & Al Nahyan, M. T. (2017). Role of school leadership and climate in student achievement: The mediating role of parental involvement. *International Journal of Educational Management*, 31(6), 843-851. <https://doiorg.ezproxy.lib.ucalgary.ca/10.1108/IJEM-05-2016-0113>
- Al-Alwan, A. F. (2014). Modeling the relations among parental involvement, school engagement and academic performance of high school students. *International Education Studies*, 7(4), 47-56. <http://dx.doi.org/10.5539/ies.v7n4p47>

- Alliance for the Study of School Climate (2004) *The School Climate Assessment Instrument*. Charter College of Education, CSULA . Retrieved June 17, 2021 from <http://web.calstatela.edu/centers/schoolclimate/services/products.html>
- Ardasheva, Y., Tretter, T. R., & Kinny, M. (2011). English Language Learners and academic achievement: Revisiting the threshold hypothesis. *Language Learning, 62*(3), 769–812. <https://doi.org/10.1111/j.1467-9922.2011.00652.x>
- Ayscue, J. B. (2016). Promising or potentially harmful? Suburban school responses to racial change. *Peabody Journal of Education, 91*(3), 326–347. <https://doi.org/10.1080/0161956X.2016.1182840>
- Barile, J., Donohue, D., Anthony, E., Baker, A., Weaver, S., & Henrich, C. (2011). Teacher–student relationship climate and school outcomes: Implications for educational policy initiatives. *Journal of Youth and Adolescence, 41*(3), 256–267. <https://doi.org/10.1007/s10964-011-9652-8>
- Bartolo, P. A. (2010). Why school psychology for diversity? *School Psychology International, 31*(6), 567–580. <https://doi.org/10.1177/0143034310386532>
- Berkowitz, R., Moore, H., Astor, R., & Benbenishty, R. (2017). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *Review of Educational Research, 87*(2), 425–469. <https://doi.org/10.3102/0034654316669821>



Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. (2014). Promoting an equitable and supportive school climate in high schools: The role of school organizational health and staff burnout. *Journal of School Psychology, 52*(6), 567–582. <https://doi.org/10.1016/j.jsp.2014.09.003>

Bryk, A. S. (2010). Organizing schools for improvement. *Phi Delta Kappan, 91*(7), 23–30. <https://doi.org/10.1177/003172171009100705>

Bustamante, R. M., Nelson, J. A., & Onwuegbuzie, A. J. (2009). Assessing schoolwide cultural competence: Implications for school leadership preparation. *Educational Administration Quarterly, 45*(5), 793–827. <https://doi.org/10.1177/0013161X09347277>

Callahan, R. (2005). Tracking and high school English learners: Limiting opportunity to learn. *American Educational Research Journal, 42*(2), 305–328. <https://doi.org/10.3102/00028312042002305>

Callahan, R., Wilkinson, L., Muller, C., & Frisco, M. (2009). ESL placement and schools: Effects on immigrant achievement. *Educational Policy, 23*(2), 355–384. <https://doi.org/10.1177/0895904807310034>

Canadian Psychological Association. (2017). Canadian code of ethics for psychologists (4th ed.). Retrieved July 8, 2021, from [https://cpa.ca/docs/File/Ethics/CPA\\_Code\\_2017\\_4thEd.pdf](https://cpa.ca/docs/File/Ethics/CPA_Code_2017_4thEd.pdf)

- Cemalcilar, Z., (2010). Schools as socialisation contexts: Understanding the impact of school climate factors on students sense of school belonging. *Applied Psychology*, 59(2), 243–272.  
<https://doi.org/10.1111/j.1464-0597.2009.00389.x>
- Chavez, B. (2019) *Immigration and language in Canada, 2011 and 2016*. Statistics Canada.
- Chirkina, T. A, & Khavenson, T. E. (2018). School climate: a history of the concept and approaches to defining and measuring it on pisa questionnaires. *Russian Education and Society*, 60(2), 133–160. <https://doi.org/10.1080/10609393.2018.1451189>
- Cho, S. & McDonnough, J. T. (2009). Meeting the needs of high school science teachers in English language learner instruction. *Journal of Science Teacher Education*, 20(4), 385–402.  
<https://doi.org/10.1007/s10972-009-9136-9>
- Civitillo, S., Göbel, K., Preusche, Z., & Jugert, P. (2021). Disentangling the effects of perceived personal and group ethnic discrimination among secondary school students: The protective role of teacher-student relationship quality and school climate. *New Directions for Child and Adolescent Development*. <https://doi.org/10.1002/cad.20415>
- Cohen, J., McCabe, E., Michelli, N., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180-213.  
DOI:10.3102/0034654313483907

- Cooper, M. (2018). Almost everything works: Good news about high school completion. Burns Memorial Fund. Retrieved August 18, 2021 from <https://burnsfund.com/wp-content/uploads/2018/01/HSC-Paper-FINAL.pdf>
- Corbeil, J. (2018). *Linguistic characteristics of Canadians*. Statistics Canada. Retrieved June 4, 2021, from <https://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-314-x/98-314-x2011001-eng.cfm>
- Cummins, J. (1981). *The role of primary language development in promoting educational success for language minority students*. In California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework* (p. 3-49). Evaluation, Dissemination and Assessment Center, California State University, Los Angeles. Retrieved June 20, 2021 from <http://www.eric.ed.gov/PDFS/ED249773.pdf>
- Cummins, J., Mirza, R., & Stille, S. (2012). English Language Learners in Canadian schools: Emerging directions for school-based policies. *TESL Canada Journal*, 29(SI6), 25–48. <https://doi.org/10.18806/tesl.v29i0.1121>
- Daily, S. M., Mann, M. J., Kristjansson, A. L., Smith, M. L., & Zullig, K. J. (2019). School climate and academic achievement in middle and high school students. *The Journal of School Health*, 89(3), 173–180. <https://doi.org/10.1111/josh.12726>

- Demirtas-Zorbaz, S., Akin-Arikan, C., & Terzi, R. (2021). Does school climate that includes students' views deliver academic achievement? A multilevel meta-analysis. *School Effectiveness and School Improvement*, 1–21. <https://doi.org/10.1080/09243453.2021.1920432>
- Drake, T. A.. (2014). The effect of community linguistic isolation on Language-Minority student achievement in high school. *Educational Researcher*, 43(7), 327–340. <https://doi.org/10.3102/0013189X14547349>
- Ferrer-Cascales, R., Albaladejo-Blázquez, N., Sánchez-SanSegundo, M., Portilla-Tamarit, I., Lordan, O., & Ruiz-Robledillo, N.. (2019). Effectiveness of the TEI program for bullying and cyberbullying reduction and school climate improvement. *International Journal of Environmental Research and Public Health*, 16(4), 580. <https://doi.org/10.3390/ijerph16040580>
- Gage, N. A., & Larson, A. (2013). *The Meriden School Climate Survey-Student Version*. Meriden, CT: Meriden Public Schools. Retrieved April 13, 2021 from [https://www.meridenk12.org/Customer-Content/www/CMS/files/Research/AERA2014\\_paper.pdf](https://www.meridenk12.org/Customer-Content/www/CMS/files/Research/AERA2014_paper.pdf)
- Gage, N. A., Larson, A., & Chafouleas, S. M. (2016). The Meriden School Climate Survey–Student Version. *Assessment for Effective Intervention*, 41(2), 67–78. <https://doi.org/10.1177/1534508415596960>

- Gándara, P. & Orfield, G. (2010). *A return to the "Mexican Room": The segregation of Arizona's English learners*. The Civil Rights Project, UCLA. Retrieved June 20, 2021 from: <https://escholarship.org/uc/item/7m67q3b9>
- Gándara, P., & Rumberger, R. W. (2009). Immigration, language, and education: How does language policy structure opportunity? *Teachers College Record*, *111*(3), 750-782. Retrieved From: <https://eric.ed.gov/?id=EJ829127>
- Garcia, E., Sulik, M., & Obradović, J. (2019). Teachers' perceptions of students' executive functions: Disparities by gender, ethnicity, and ELL status. *Journal of Educational Psychology*, *111*(5), 918–931. <https://doi.org/10.1037/edu0000308>
- Gower, A., Forster, M., Gloppen, K., Johnson, A., Eisenberg, M., Connett, J., & Borowsky, I. (2018). School practices to foster LGBT-supportive climate: Associations with adolescent bullying involvement. *Prevention Science*, *19*(6), 813–821. <https://doi.org/10.1007/s11121-017-0847-4>
- Hakuta, K., Butler, Y. G., & Witt, D. (2000). *How long does it take English learners to attain proficiency?* The University of California Linguistic Minority Research Institute Policy Report 2000-1, Retrieved June 15, 2021 from [https://web.stanford.edu/~hakuta/Publications/\(2000\)%20-%20HOW%20LONG%20DOES%20IT%20TAKE%20ENGLISH%20LEARNERS%20TO%20ATTAIN%20PR.pdf](https://web.stanford.edu/~hakuta/Publications/(2000)%20-%20HOW%20LONG%20DOES%20IT%20TAKE%20ENGLISH%20LEARNERS%20TO%20ATTAIN%20PR.pdf)

He, Y. (2013). Developing teachers' cultural competence: Application of appreciative inquiry in ESL teacher education. *Teacher Development*, 17(1), 55–71.

<https://doi.org/10.1080/13664530.2012.753944>

Hoff, E. (2013). Interpreting the early language trajectories of children from low-SES and language minority homes: Implications for closing achievement gaps. *Developmental Psychology*, 49(1),

4–14. <https://doi.org/10.1037/a0027238>

Howard, T. C. (2003). "A tug of war for our minds:" African American high school students' perceptions of their academic identities and college aspirations. *The High School Journal*, 87(1), 4–17.

<https://doi.org/10.1353/hsj.2003.0017>

Hoy, W. K., & Hannum, J. W. (1997). Middle school climate. *Educational Administration Quarterly*, 33(3), 290–311. <https://doi.org/10.1177/0013161X97033003003>

Hughes, M., Gaines, J., & Pryor, D. (2015). Staying away from school. *Youth Violence and Juvenile Justice*, 13(3), 270–290. <https://doi.org/10.1177/1541204014538067>

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement. *Urban Education*, 42(1), 82–110.

<https://doi.org/10.1177/0042085906293818>

- Kanno, Y., & Cromley, J.G. (2013). English Language Learners' access to and attainment in postsecondary education. *TESOL Quarterly*, 47(1), 89–121. <https://doi.org/10.1002/tesq.49>
- Kanno, Y., & Varghese, M. (2010). Immigrant and refugee ESL students' challenges to accessing four-year college education: From language policy to educational policy. *Journal of Language, Identity, and Education*, 9(5), 310–328. <https://doi.org/10.1080/15348458.2010.517693>
- Kawabata, Y., & Crick, N. (2011). The significance of cross-racial/ethnic friendships: Associations with peer victimization, peer support, sociometric status, and classroom diversity. *Developmental Psychology*, 47(6), 1763–1775. <https://doi.org/10.1037/a0025399>
- Knight, D., & Duncheon, J. (2020). Broadening conceptions of a “college-going culture”: The role of high school climate factors in college enrollment and persistence. *Policy Futures in Education*, 18(2), 314–340. <https://doi.org/10.1177/1478210319860987>
- Kosciw, J., Palmer, N., Kull, R., & Greytak, E. (2013). The effect of negative school climate on academic outcomes for LGBT youth and the role of in-school supports. *Journal of School Violence*, 12(1), 45–63. <https://doi.org/10.1080/15388220.2012.732546>
- Koth, C. , Bradshaw, C. , Leaf, P. & (2008). A multilevel study of predictors of student perceptions of school climate. *Journal of Educational Psychology*, 100(1), 96-104. doi: 10.1037/0022-0663.100.1.96.

- Kreft, I. (1993). Using multilevel analysis to assess school effectiveness: A study of Dutch secondary schools. *Sociology of Education*, 66(2), 104–129. <https://doi.org/10.2307/2112796>
- LaRusso, M., Romer, D., & Selman, R. (2008). Teachers as builders of respectful school climates: Implications for adolescent drug use norms and depressive symptoms in high school. *Journal of Youth and Adolescence*, 37(4), 386–398. <https://doi.org/10.1007/s10964-007-9212-4>
- Lee, V., & Burkam, D. (2003). Dropping out of high school: The role of school organization and structure. *American Educational Research Journal*, 40(2), 353–393.  
<https://doi.org/10.3102/00028312040002353>
- Lee, V., & Croninger, R. (2001). The elements of social capital in the context of six high schools. *The Journal of Socio-Economics*, 30(2), 165–167. [https://doi.org/10.1016/S1053-5357\(00\)00092-5](https://doi.org/10.1016/S1053-5357(00)00092-5)
- Lenzi, M., Sharkey, J., Furlong, M., Mayworm, A., Hunnicutt, K., & Vieno, A. (2017). School sense of community, teacher support, and students' school safety perceptions. *American Journal of Community Psychology*, 60(3-4), 527–537. <https://doi.org/10.1002/ajcp.12174>
- Li, Y., Doyle Lynch, A., Kalvin, C., Liu, J., & Lerner, R. M. (2011). Peer relationships as a context for the development of school engagement during early adolescence. *International Journal of Behavioral Development*, 35(4), 329–342. <https://doi.org/10.1177/0165025411402578>



- Lopez, Emilia C, & Bursztyn, Alberto M. (2013). Future challenges and opportunities: Toward culturally responsive training in school psychology. *Psychology in the Schools, 50*(3), 212–228. <https://doi.org/10.1002/pits.21674>
- Madjar, N, Ben Shabat, S, Elia, R, Fellner, N, Rehavi, M, Rubin, S.E, Segal, N, & Shoval, G. (2016). Non-suicidal self-injury within the school context: Multilevel analysis of teachers' support and peer climate. *European Psychiatry, 41*(1), 95–101. <https://doi.org/10.1016/j.eurpsy.2016.11.003>
- Martinez, A., McMahon, S., Coker, C., & Keys, C. (2016). Teacher behavioral practices: Relations to student risk behaviors, learning barriers, and school climate. *Psychology in the Schools, 53*(8), 817–830. <https://doi.org/10.1002/pits.21946>
- Mayberry, M., Chenneville, T., & Currie, S. (2013). Challenging the sounds of silence. *Education and Urban Society, 45*(3), 307–339. <https://doi.org/10.1177/0013124511409400>
- National School Climate Center (2002). *Comprehensive School Climate Inventory*. National School Climate Center. Retrieved July 1, 2021 from <https://schoolclimate.org/services/measuring-school-climate-csci/>
- Ngo, H. (2012). Cultural competence in Alberta schools: Perceptions of ESL families in four major school boards. *TESL Canada Journal, 29*(6), 204 – 223. <https://doi.org/10.18806/tesl.v29i0.1118>

- Ngo, H. (2008). *Cultural competence: A guide for organizational change*. Department of Canadian Heritage. Retrieved August 24, 2021 from <https://albertahumanrights.ab.ca/Documents/CulturalCompetencyGuide.pdf>
- Núñez, J. C., Suárez, N., Rosário, P., Vallejo, G., Valle, A., & Epstein, J. L. (2015). Relationships between perceived parental involvement in homework, student homework behaviors, and academic achievement: Differences among elementary, junior high, and high school students. *Metacognition and Learning, 10*(3), 375–406. <https://doi.org/10.1007/s11409-015-9135-5>
- Oberle, E., Guhn, M., Gadermann, A. M., Thomson, K., & Schonert-Reichl, K. A. (2018). Positive mental health and supportive school environments: A population-level longitudinal study of dispositional optimism and school relationships in early adolescence. *Social Science & Medicine (1982)* 214, 154–161. <https://doi.org/10.1016/j.socscimed.2018.06.041>
- Olsen, J., Preston, A. I., Algozzine, B., Algozzine, K., & Cusumano, D. (2018). A review and analysis of selected school climate measures. *The Clearing House, 91*(2), 47–58. <https://doi.org/10.1080/00098655.2017.1385999>
- Ramsey, C. M., Spira, A. P., Parisi, J. M., & Rebok, G. W. (2016). School climate: Perceptual differences between students, parents, and school staff. *School Effectiveness and School Improvement, 27*(4), 629–641. <https://doi.org/10.1080/09243453.2016.1199436>

- Ricard, N. C., & Pelletier, L. G. (2016). Dropping out of high school: The role of parent and teacher self-determination support, reciprocal friendships and academic motivation. *Contemporary Educational Psychology*, 44-45, 32–40. <https://doi.org/10.1016/j.cedpsych.2015.12.003>
- Riley, T. (2015). "I know I'm generalizing but...": How teachers' perceptions influence ESL learner placement. *TESOL Quarterly*, 49(4), 659–680. <https://doi.org/10.1002/tesq.191>
- Rodriguez, D., Ringler, M., O'Neal, D., & Bunn, K. (2009). English Language Learners' perceptions of school environment. *Journal of Research in Childhood Education*, 23(4), 513–526. <https://doi.org/10.1080/02568540909594678>
- Roessingh, H. (2006a). BICS-CALP: An introduction for some, a review for others. *TESL Canada Journal*, 23(2), 91. <https://doi.org/10.18806/tesl.v23i2.57>
- Roessingh, H. (2006b). The teacher is the key: Building trust in ESL high school programs. *Canadian Modern Language Review*, 62(4), 563–590. <https://doi.org/10.1353/cml.2006.0039>
- Roessingh, H. (2016). Academic language in k-12 - What it is, how it is learned, and how we can measure it? *BC TEAL Journal*, 1(1), 67-81. <https://ojs.library.ubc.ca/index.php/BCTJ/article/view/235>

Roessingh, H., & Douglas, S. (2012). Educational outcomes of English language learners at university.

*Canadian Journal of Higher Education*, 42(1), 82 – 97.

<https://doi.org/10.47678/cjhe.v42i1.182449>

Roessingh, H., & Douglas, S. (2012). English Language Learners' transitional needs from high school to university: An exploratory study. *Journal of International Migration and Integration*, 13(3), 285

– 301. <https://doi.org/10.1007/s12134-011-0202-8>

Sanders, S., Durbin, J., Anderson, B., Fogarty, L., Giraldo-Garcia, R., & Voight, A. (2018). Does a

rising school climate lift all boats? Differential associations of perceived climate and

achievement for students with disabilities and limited English proficiency. *School Psychology*

*International*, 39(6), 646–662. <https://doi.org/10.1177/0143034318810319>

Sebring, P. B., Allensworth, E., Bryk, A. S., Easton, J. Q., & Luppescu, S. (2006). *The essential supports for school improvement. Research Report*. In Consortium on Chicago School Research.

Retrieved June 17, 2021 from [https://consortium.uchicago.edu/sites/default/files/2018-](https://consortium.uchicago.edu/sites/default/files/2018-10/EssentialSupports.pdf)

10/EssentialSupports.pdf

Shochet, I., Dadds, M., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized

parameter in adolescent mental health: Results of a community prediction study. *Journal of*

*Clinical Child and Adolescent Psychology*, 35(2), 170–179.

[https://doi.org/10.1207/s15374424jccp3502\\_1](https://doi.org/10.1207/s15374424jccp3502_1)

- Shukla, S. Y., Tombari, A. K., Toland, M. D., & Danner, F. W. (2015). Parental support for learning and high school students' academic motivation and persistence in mathematics. *Journal of Educational and Developmental Psychology*, 5(1). DOI:[10.5539/jedp.v5n1p44](https://doi.org/10.5539/jedp.v5n1p44)
- Silinskas, G., & Kikas, E. (2019). Parental Involvement in math homework: Links to children's performance and motivation. *Scandinavian Journal of Educational Research*, 63(1), 17–37. <https://doi.org/10.1080/00313831.2017.1324901>
- Solomon, B., Klein, S., Hintze, J., Cressey, J., & Peller, S. (2012). A meta-analysis of school-wide positive behavior support: An exploratory study using single-case synthesis. *Psychology in the Schools*, 49(2), 105–121. <https://doi.org/10.1002/pits.20625>
- Spencer, M. S., Brown, M., Griffin, S., & Abdullah, S. (2008). Outcome evaluation of the intergroup project. *Small Group Research*, 39(1), 82–103. <https://doi.org/10.1177/1046496407313416>
- Szpara, M., & Ahmad, I. (2007). Supporting English-Language Learners in social studies class: Results from a study of high school teachers. *The Social Studies*, 98(5), 189–196. <https://doi.org/10.3200/TSSS.98.5.189-196>
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357–385. <https://doi.org/10.3102/0034654313483907>

- Trickett, E., Rukhotskiy, E., Jeong, A., Genkova, A., Oberoi, A., Weinstein, T., & Delgado, Y. (2012). "The kids are terrific: It's the job that's tough": The ELL teacher role in an urban context. *Teaching and Teacher Education*, 28(2), 283–292. <https://doi.org/10.1016/j.tate.2011.10.005>
- Tweedie, M., & Kim, M. (2017). EAP curriculum alignment and social acculturation: student perceptions. *TESL Canada Journal*, 33(1), 41 - 57. doi:<https://doi.org/10.18806/tesl.v33i1.1226>
- Van Eck, K., Johnson, S., Bettencourt, A., & Johnson, S. (2017). How school climate relates to chronic absence: A multi-level latent profile analysis. *Journal of School Psychology*, 61, 89–102. <https://doi.org/10.1016/j.jsp.2016.10.001>
- Vitoroulis, I., Brittain, H., & Vaillancourt, T. (2016). School ethnic composition and bullying in Canadian schools. *International Journal of Behavioral Development*, 40(5), 431–441. <https://doi.org/10.1177/0165025415603490>
- Voight, A., Austin, G., & Hanson, T. (2013). *A climate for academic success: How school climate distinguishes schools that are beating the achievement odds*. San Francisco: WestEd. Retrieved June 27, 2021 from [https://www2.wested.org/www-static/online\\_pubs/hd-13-10.pdf](https://www2.wested.org/www-static/online_pubs/hd-13-10.pdf)
- Voight, A., & Nation, M. (2016). Practices for improving secondary school climate: a systematic review of the research literature. *American Journal of Community Psychology*, 58(1-2), 174–191. <https://doi.org/10.1002/ajcp.12074>

- Voight, A., Hanson, T., O'Malley, M., & Adekanye, L. (2015). The racial school climate gap: Within-school disparities in students' experiences of safety, support, and connectedness. *American Journal of Community Psychology*, *56*(3), 252–267. <https://doi.org/10.1007/s10464-015-9751-x>
- Waasdorp, T., Pas, E., O'Brennan, L., & Bradshaw, C. (2010). A multilevel perspective on the climate of bullying: discrepancies among students, school staff, and parents. *Journal of School Violence*, *10*(2), 115–132. <https://doi.org/10.1080/15388220.2010.539164>
- Wassell, B., Fernández Hawrylak, M., & LaVan, S.K. (2010). Examining the structures that impact English Language Learners' agency in urban high schools: Resources and roadblocks in the classroom. *Education and Urban Society*, *42*(5), 599–619.  
<https://doi.org/10.1177/0013124510375598>
- Wentzel, K. R. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development*, *73*(1), 287–301. <https://doi.org/10.1111/1467-8624.00406>
- WestEd. (2014) *California School Climate, Health, and Learning Survey*. San Francisco:WestEd.  
Retrieved July 1, 2021 from <https://calschls.org/about/the-surveys/#chks>
- Wong, C. W. S., & Schweitzer, R. D. (2017). Individual, premigration and postsettlement factors, and academic achievement in adolescents from refugee backgrounds: A systematic review and model. *Transcultural Psychiatry*, *54*(5-6), 756–782. <https://doi.org/10.1177/1363461517737015>

Zullig, K. J., Koopman, T. M., Patton, J. M., & Ubbes, V. A.(2010). School climate: Historical review, instrument development, and school assessment. *Journal of Psychoeducational Assessment*, 28, 139–152. doi:10.1177/0734282909344205