

Does School Climate Distinguish Consistently High-Performing Schools From Others?

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Meaningful learning happens when a school's climate is positive, respectful, and productive. Research on school success often focuses on how school practices, policies, and resources can improve student behavior to boost academic achievement and maximize student outcomes. Although there are many factors that can affect student performance, evidence from some studies suggests that positive school climate can foster academic success (Voight et al., 2013).

Findings from several studies conducted in recent years suggest that a supportive and inclusive learning environment is associated with better academic outcomes for students and may even reduce disparities in achievement between different groups of students at the same school (National Center on Safe Supportive Learning Environments, n.d.; Office of Safe and Healthy Students, 2016). This brief builds on those studies, using available data on school performance, school climate, and student demographics in California to explore how a positive school climate may interact with systemic inequities to affect school-level outcomes. Specifically, this brief considers the following question:

Could school climate explain why some schools consistently outperform other schools academically?

Key Findings

Students at California secondary schools that performed best academically reported the presence of a more positive school climate than did students at schools that did not perform as well in the same time period.

Specifically, at the highest performing schools, students' reported perceptions of supports and engagement at school were more positive, and they reported less violence, victimization, and substance use, compared with their peers at lower performing schools. These differences were statistically significant across all areas of school climate included in the study. While these results do not indicate a direction of causation, they do align with the findings of other studies of school climate and student performance that suggest safe and supportive learning environments may be an important ingredient contributing to student academic success (Voight, 2013).

These findings are promising because, while they corroborate the existence of inequities in how schools are serving students, they also highlight the potential for schools to level these inequities through attention to how students experience their learning environments, which research has shown to vary by characteristics such as student race and ethnicity (Voight, 2013). In addition, the findings from this study set a foundation for future research examining what schools can do to cultivate a welcoming, safe, and healthy environment that is student-centered and supports academic success.

What is school climate, and how does it relate to academic learning?

Although there is no consensus on a single definition of school climate (Thapa, 2013), it is generally understood to encompass the qualities of the school environment experienced by students and staff, including relationships, teaching and learning practices, and organizational structures (Thapa, 2013; National School Climate Center, n.d.). Reviews on school climate have identified several factors: safety and discipline, academic supports, personal and social relationships, equity and respect for diversity, school facilities, and school connectedness (Austin et al., 2011; Cohen et al., 2009; Zullig et al., 2010).

Measuring school climate involves asking particular groups—such as students, school staff, school leaders, family members, and students—to report their perceptions of school climate. It is important to include diverse perspectives in measures of school climate because different groups experience school climate differently, including students and teachers (Maxwell et al., 2017; Mitchell et al., 2010) and various racial and ethnic groups (Konold et al., 2017; Zhang et al., 2020). In this study, the focus was on student perceptions of school climate.

A positive school climate can facilitate the conditions for learning and teaching so that all members of a school can thrive (Hashmi et al., 2022). There is evidence to suggest that these school climate factors play an important role in transforming schools and supporting students (Bryk et al., 2010), and a positive school climate has been associated with higher academic achievement and healthy behavioral outcomes for students (Brand et al., 2003; Konold et al., 2018; Patton et al., 2006).

Research continues to identify school climate as an important aspect of students' educational experience and one that, when positive, can be a factor in improving academic achievement (Caskey et al., 2016; Voight et al., 2013). Any efforts to improve academic performance also need to place attention on social, emotional, and material needs (Piscatelli & Lee, 2011).

Methods

This brief examines the extent to which school climate can explain why some schools consistently outperform other schools academically. The study defines academically successful schools as schools in which all students, students eligible for free or reduced-priced meals (FRPM), students designated as English Learners, and African American and Hispanic/Latino¹ students consistently performed above average on the California Assessment of Student Performance and Progress (CAASPP) over 3 consecutive academic years from 2015/16 through 2018/19.

Sample Selection

A total of 2,377 unduplicated schools were part of the sample. Of these, 325 schools (13.7%, consisting of 204 middle schools and 121 high schools) were determined to be academically High-Performing, and 108 schools (4.5%, consisting of 86 middle schools and 22 high schools) were identified as Underperforming. The 1,944 remaining schools (81.8%) in the sample were categorized as Other schools.

Only middle and high schools in California were included in the study. Charter schools were excluded from the analyses. The sample was limited to schools that administered the California Healthy Kids Survey (CHKS) at least one time from the 2015/16 school year to the 2018/19 school year. Four sources of data from California secondary schools were used:

- local CHKS data from middle and high schools that administered the survey at least one time from 2015/16 to 2018/19
- School Climate Index
- demographic data from the California Basic Educational Data System (CBEDS) database between 2015/16 and 2018/19, including student and school racial characteristics and the proportion of students designated as English Learners and of students eligible for FRPM

¹ Race and ethnicity descriptors vary across the country. Some terms are widely accepted while others are dependent on region, community, or personal preference. For the purposes of this brief, the nomenclature used to refer to race or ethnicity is based on the terms used in the California Basic Educational Data System (CBEDS) database.

- CAASPP System database scores for English language arts (ELA) and math for students in grades 7, 8, and 11 for the years 2015/16 to 2018/19

Analytic Approach

To classify schools by academic performance, WestEd researchers first conducted a series of linear regression analyses to identify an academic performance score for each subject (ELA and math scores on the CAASPP), demographic group, and academic year. This academic performance score was then used to categorize each school as either High-Performing, Underperforming, or Other. Once each school in the sample had been assigned

to a category, a multivariate regression analysis was conducted for each of 10 school climate measures—including the School Climate Index (SCI) and the two domains and seven subdomains shown in Table 1—to determine whether school category significantly predicted differences in school climate variables. The regression models included controls for the percentages of students eligible for FRPM, students designated as English Learners, Hispanic/Latino students, and African American students and for total school enrollment (see Tables B1 and B2).

The school climate domains and subdomains used as outcomes in this analysis are shown in Table 1.

Table 1. California Healthy Kids Survey Domains and Subdomains

Domain	Subdomains
Supports and Engagement	High Expectations and Caring Relationships Opportunities for Meaningful Participation Perceived School Safety School Connectedness
Low Violence, Victimization, and Substance Use	Low Physical and Emotional Violence Victimization Low Harassment and Bullying Low Substance Use at School

High-Performing Schools, Underperforming Schools, and Other Schools

High-Performing Schools

To be considered High-Performing, schools had to demonstrate high average scores on the CAASPP for 3 consecutive years in two subjects (ELA and math), for all students, and for each of the following four student groups: African American students, Hispanic/Latino students, English Learners, and students eligible for FRPM. Academic performance for these groups was examined to be sure each school was addressing the needs of all students. High average scores were defined as those that were 0.25 standard deviation units above the mean residual. (Because there is little difference in performance for schools with a residual near zero, a 0.25 standard deviation criterion helps to better distinguish between High-Performing and Underperforming schools.)

Underperforming Schools

A similar process was used to identify Underperforming schools throughout the state. Underperforming schools were those at which the residual cut point was at least 0.25 standard deviation units below the mean for all students, for each subject (ELA and math), and for the four student groups.

Other Schools

The remaining schools in the sample were classified as “Other” schools. These schools did not meet the criteria for High-Performing or Underperforming schools. Specifically, this category included any school whose average scores on the CAASPP met the cutoff for high academic performance (0.25 standard deviation units above the mean residual) for only 1 or 2 academic years. Schools were also classified as “Other” if they performed highly on the CAASPP in one but not both subjects (ELA and math) or for some but not all student groups.

Could school climate explain why some schools consistently outperform other schools academically?

Average scores on the SCI, a global measure of school climate, and for the two school climate domains (Overall Supports and Engagement, Overall Low Violence, Victimization, and Substance Use) are depicted graphically in Figure 1 on page 6. **The analysis suggests that students’ reported perceptions of school climate are more positive at High-Performing schools than at all other schools, as indicated by higher scores in both the SCI and in the Overall Supports and Engagement domain.** Specifically, scores were higher in the areas of High Expectations and Caring Relationships, Opportunities for Meaningful Participation, Perceived School Safety, and School Connectedness. **High-Performing schools also had higher scores in Overall Low Violence, Victimization, and Substance Use when compared to Underperforming and Other schools.** This suggests that students in High-Performing schools may perceive less violence, victimization, and substance misuse at school than do their peers in Underperforming and Other schools (Table 2).

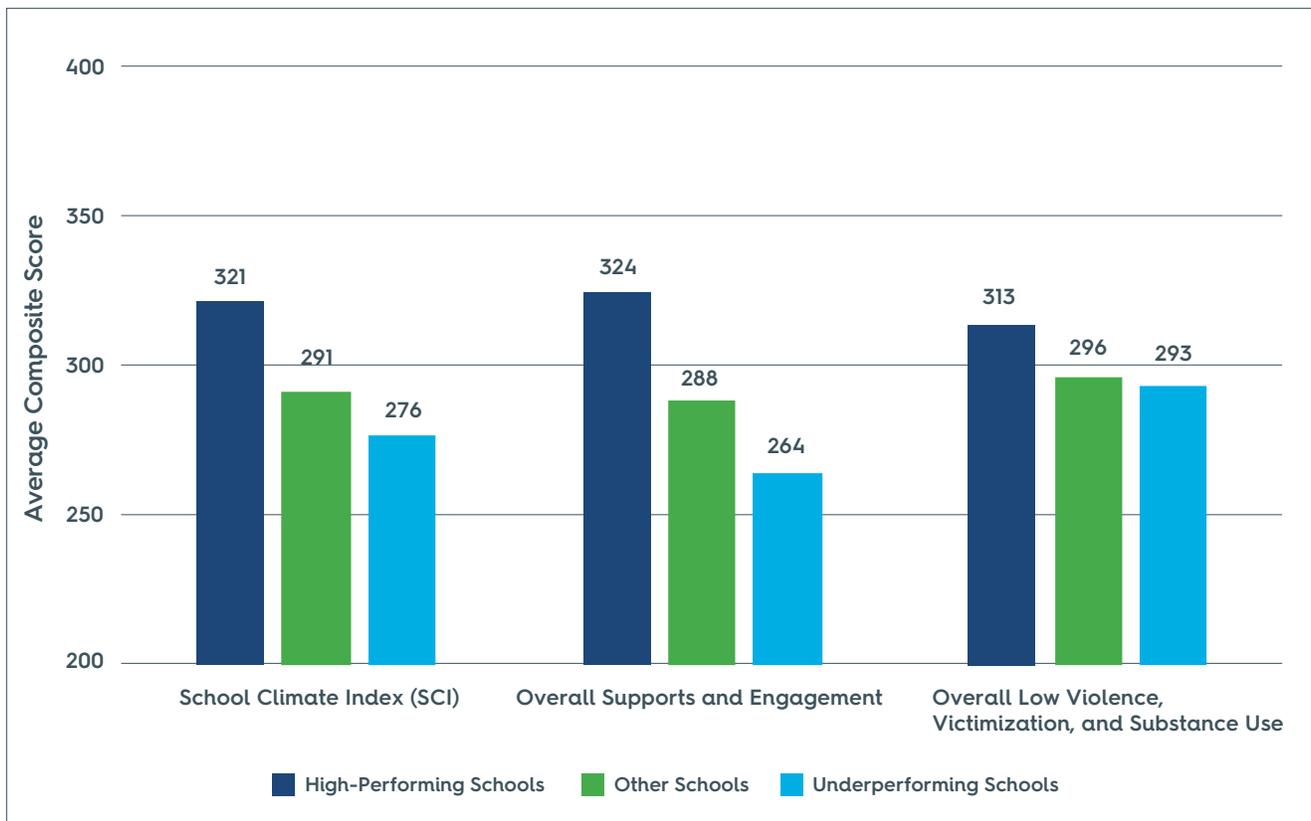
Across the 10 school climate outcomes included in this analysis, schools where students performed well on the CAASPP reported more positive school climates than did schools where students overall did not perform as well on the CAASPP or where student performance on the CAASPP varied by student demographic group. The differences between these average composite scores at High-Performing, Other, and Underperforming schools were statistically significant.

Table 2. Average School Climate Scores of High-Performing, Other, and Underperforming Schools

	High-Performing schools	Other schools	Underperforming schools
School Climate Index	321	291	276
Overall Supports and Engagement	324	288	264
High Expectations and Caring Relationships	327	295	275
Opportunities for Meaningful Participation	319	289	270
Perceived School Safety	324	286	260
School Connectedness	321	287	261
Overall Low Violence, Victimization, and Substance Use	313	296	293
Low Physical and Emotional Violence Victimization	303	288	284
Low Harassment and Bullying	295	277	272
Low Substance Use at School	312	291	279

Note. All climate indices range from 100 to 500, with higher scores representing school climates that are more positive. The average score for each indicator was 300 for the state as a whole for the period of 2015-17, with a standard deviation of 50.

Figure 1. School Climate in High-Performing, Other, and Underperforming Schools



Call to Action

Fostering a positive school climate is an important part of school, district, and community efforts to ensure that all students are being served equitably and well. The literature on school climate highlights a number of strategies for promoting a positive learning environment for students.

One such strategy is to invest time in deep listening to identify what is happening at the school level. School success encompasses far more than the results of standardized testing, and researchers may consider using interviews or focus groups with students and staff to provide insights that are currently missing. Districts and communities can also help take steps to understand the root causes of inequity at a systems level and how community assets can be leveraged to help eliminate disparities in student experiences at school (Walrond, 2021).

Researchers might consider engaging in conversations with educational partners (e.g., school leadership, school staff, students, family members, community partners) to discuss questions such as the following:

- What is the unique local school and community context?
- What practices to enhance school climate are these schools already engaging in?
- What is going well that may not be reflected in student test scores?
- What do students and staff see as areas for growth?
- What are the stories behind the data?

Conclusion

Like much of the evidence in a growing body of work on the impact of school climate, this report suggests that **school climate may be a key factor influencing academic achievement**. Even when accounting for barriers to students' academic success through the use of demographic proxies, there were significant differences in school climate between High-Performing, Other, and Underperforming schools. This finding aligns with the results of previous studies (Voight et al., 2013) showing an association between positive school climate and students' academic success. However, the results presented here do not indicate a direction of causation, and they warrant further exploration. Schools seeking to leverage school climate as a mechanism for improving academic achievement would benefit from additional research and evaluation to identify effective interventions.

This study suggests that fostering a positive school climate may be a key strategy for schools to ensure that they are helping all students succeed academically. There is no single approach to improving school climate that will fit every school without adjusting to meet the needs of local contextual factors. The findings from this study open doors to future research examining what schools can do to cultivate a welcoming, safe, and healthy environment that is student-centered and that supports learning for all students.

Appendix A: Data Sources

This brief draws on data from traditional middle and high schools in California (charter schools were excluded from the analysis). The sample was limited to schools that administered the California Healthy Kids Survey (CHKS) at least one time from the 2015/16 school year to the 2018/19 school year. Four sources of data were used:

- local CHKS data from middle and high schools that administered the survey at least one time from 2015/16 to 2018/19
- School Climate Index
- demographic data from the California Basic Educational Data System (CBEDS) database between 2015/16 and 2018/19, including student and school racial characteristics and the proportion of students designated as English Learners and of students eligible for free or reduced-priced meals (FRPM)
- California Assessment of Student Performance and Progress (CAASPP) System database from 2015/16 to 2018/19

The following paragraphs provide more information on each of these data sources.

California Healthy Kids Survey

The CHKS was used to measure school climate. In completing the CHKS, students indicate how supporting, engaging, and safe they perceive their school to be or the extent to which they are victims of bullying or violence, and they indicate how often they use or have access to substances. A factor analysis of the CHKS identified seven latent constructs (referred to as subdomains) under two domains: (a) Supports and Engagement with four subdomains and (b) Low Violence, Victimization, and Substance Use with three subdomains (Hanson, 2012). The items in these domains and subdomains were used to measure school climate for this study.

School Climate Index

The same two domains of the CHKS—(a) Supports and Engagement and (b) Low Violence, Victimization, and Substance Use—are also used to calculate an overall school climate rating, or School Climate Index (SCI). The SCI is rescaled to range from 100 to 500, with a mean of 300 and a standard deviation of 50. All school climate domains and subdomains (e.g., High Expectations and Caring Relationships) are scaled in a similar fashion.

California Basic Educational Data System

Several databases were combined to identify demographic characteristics for public middle and high school students in California from 2015/16 to 2018/19. School demographic data from the CBEDS database for the year corresponding with CHKS data were linked to each school. Data related to markers of disparity caused by unequal access to resources and structural racism were identified and gathered from the CBEDS database. These demographic characteristics include race/ethnicity (percentage of African American and Hispanic/Latino students), percentage of students designated as English Learners, and percentage of students eligible for FRPM.

California Assessment of Student Performance and Progress

Academic performance was measured with the CAASPP System. Middle school academic indicators included English language arts (ELA) and math scores from the Smarter Balanced Summative Assessments from school years 2015/16 to 2018/19. Test scores in each subject for grades 7 and 8 were standardized by grade level and weighted by the number of students tested in each grade to represent an overall middle school score for each school. For high school, academic indicators included high school ELA and math scale scores from the Smarter Balanced Summative Assessments for grade 11 from school years 2015/16 to 2018/19. An overall student average was calculated for each subject in each school along with an average for each of the following student groups: African American students, Hispanic/Latino students, students designated as English Learners, and students eligible for FRPM.

Appendix B: School Characteristics

Table B1. Student Demographic Characteristics of High-Performing, Other, and Underperforming Middle Schools

	High-Performing schools	Other schools	Underperforming schools
Average % eligible for free or reduced-price meals (SD)	56.8 (30.2)	59.3 (26.6)	68.5 (24.5)
Average % English learner (SD)	18.4 (17.9)	18.2 (13.8)	26.1 (15.0)
Average % Hispanic/Latino (SD)	54.3 (32.4)	51.7 (28.1)	64.7 (26.7)
Average % African American (SD)	3.8 (8.7)	4.9 (7.5)	5.8 (8.1)
Total school enrollment (SD)	622 (337)	758 (375)	756 (293)

Note. Sixty-five schools in the sample included both middle and high school academic data and were counted in both groups for all demographic categories. Demographic data were not available for all categories for all schools.

Table B2. Student Demographic Characteristics of High-Performing, Other, and Underperforming High Schools

	High-Performing schools	Other schools	Underperforming schools
Average % eligible for free or reduced-price meals (SD)	57.3 (25.0)	56.0 (29.4)	60.6 (23.3)
Average % English learner (SD)	11.1 (12.7)	11.4 (9.0)	13.0 (8.2)
Average % Hispanic/Latino (SD)	50.3 (33.2)	51.1 (27.0)	54.5 (24.3)
Average % African American (SD)	3.2 (5.8)	5.3 (7.4)	3.9 (4.2)
Total school enrollment (SD)	1022 (704)	1564 (848)	957 (906)

Note. Sixty-five schools in the sample included both middle and high school academic data and were counted in both groups for all demographic categories. Demographic data were not available for all categories for all schools.

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