

issue brief

June 2013

EXAMINING STUDENTS' PERCEPTIONS OF THE SCHOOL ENVIRONMENT: SEQUOIA HIGH SCHOOL'S SCHOOL CLIMATE SURVEY

Manuelito Biag & Monika Sanchez

Background

School climate refers to the quality and character of school life, which generally includes the school's prevailing norms, values, interpersonal relationships, teaching practices, and organizational structures (Cohen, McCabe, Michelli, & Pickeral, 2009). School climate is often measured by asking students to report what it feels like to be learning in a particular school setting. Research has shown that a school's climate can either increase students' vulnerabilities or promote their resiliency. Studies have linked students' perceptions and experiences at school to their attendance, social adjustment, motivation to learn, and risk-taking behaviors (e.g., Battistich et al., 1995; Becker & Luthar, 2002; Kuperminc, Leadbeater, & Blatt, 2001; McNeely & Falci, 2004; Ryan & Patrick, 2001; Weinstein, 2002).

At the request of the Sequoia Union High School District, the John W. Gardner Center for Youth and Their Communities at Stanford University (Gardner Center) collaborated in 2012 with one of the district's four comprehensive high schools—Sequoia High School—to develop a survey instrument that tapped students' perceptions of various aspects of the school environment (e.g., sense of safety at school). Sequoia High School has long been interested in issues surrounding school climate, and the administration approached us to help fine-tune their existing survey so that it better captured the concepts it was trying to understand.

For this study, we also partnered with the Redwood City School District (RCSD) to examine how students' perceptions of school climate shifted over time, specifically as they transitioned from RCSD middle schools to Sequoia High School. Research has shown that youth transitioning from middle to high school experience significant changes in their classroom and school environments (e.g., bigger classroom sizes, more peer groups; Newman, Myers, Newman, Lohman, & Smith, 2000), which can influence their academic, social, and psychological functioning (Herlihy, 2007). Since 2009, we have worked with RCSD in administering surveys to all middle school students to assess their motivational beliefs as well as classroom and school experiences. One set of questions, focused on students' overall sense of care at school, were asked both in RCSD's and Sequoia High

School's surveys; as such, we were able to examine longitudinally how students' self-reports on this measure changed during this transitional period in their academic career.¹

We set out to analyze the results of the 2011-12 Sequoia High School Survey regarding students' perceptions of academic support, care, connectedness, and safety at school, and to discover the extent to which students report resilience-promoting factors such as supportive connections with adults and positive peer relations.

The following questions guided this analysis:

1. How do results of the Sequoia High School survey differ by grade level, gender, socioeconomic status, race/ethnicity, English learner status, special education status, prior achievement, and other student characteristics?
2. To what extent does the transition from Redwood City School District schools to Sequoia High School influence 9th grade students' perceptions of care at school? What are the characteristics of students whose perceptions change across this transition?

To answer the first question, we used a series of statistical models that examine the degree to which students' demographic, disciplinary, and academic backgrounds were predictive of their reporting on key school climate measures. To answer the second question, we used the Gardner Center's Youth Data Archive (YDA) to link the administrative and survey records of 8th graders attending middle schools in RCSD to their administrative and survey records in the 9th grade at Sequoia High School. The YDA is an integrated data system containing administrative data from various public and nonprofit agencies, which enables researchers to examine questions about youth that no single agency could effectively answer on their own.

Our analyses highlight four main findings:

1. Students' grades were positively associated with high average scores on three school climate measures: *Academic Care*, *Academic Expectations*, and *Overall Sense of Care at School*.
2. All else equal, females had a greater likelihood than males of reporting positive ratings on their perceptions of *Academic Expectations* and *Overall Sense of Care at School*.
3. Compared to seniors and those without disciplinary infractions, students enrolled in the 11th grade and those with at least one suspension were less likely to report that they experienced a sense of care at school or perceived opportunities to exercise their autonomy.
4. The transition from 8th grade to Sequoia High School had a positive influence on those 8th grade students who reported low average perceptions of overall care at their middle school.

¹ Two additional scales have been added to the middle school survey: *Caring Relationships with School Adults* and *Respect for Racial/Ethnic Diversity*, as a result, we will be able to compare two additional concepts in future school years.

In this brief, we discuss the above findings in more detail. First, we describe the Sequoia High School survey and the characteristics of the students who completed it. Then, we examine influential demographic factors that shape students' appraisals of the campus environment.

The Sequoia High School survey

All Sequoia High School students enrolled in the 2011-12 school year (n = 2,074) were instructed by their guidance counselors to complete the school's climate survey online (between May and August of 2012) in order to obtain their course schedules for the 2012-13 academic year. Incoming students in the 9th grade and transfer students were not required to take the survey.

Students were asked to respond to a total of 41 questions using a six-point measure, where 1 equals *very untrue* and 6 equals *very true*. The questions tapped 13 scales that measured students' appraisals of various school experiences. In the context of survey research, scales represent the underlying subject to be measured using a particular set of questions bound together by some commonality. For Sequoia High School's survey, scales were made up of two or more interrelated questions that were averaged together to help produce precise estimates.²

Characteristics of survey respondents & non-respondents

A total of 1,606 students completed the survey (response rate = 77%). Approximately 94% of the students took the survey in English. Examining those who completed the survey, we found that 56% were Latino, 33% were White, and 11% were of other ethnicities (e.g., Asian; see Exhibit 1). In these and other demographic categories, survey respondents were similar to the overall student population at Sequoia High School. Compared to non-respondents, those who completed the survey were more likely to be female (52%), White (33%), have a parent with a college degree (33%), and be enrolled in the 9th grade in the 2011-12 school year (28%). By contrast, non-respondents were more likely than survey respondents to be male (57%), Latino (66%), an English learner (37%), participate in the Free or Reduced Price Lunch (FRPL) program (54%), receive a special education service (20%), and be enrolled in the 12th grade (34%).

² School safety was assessed using one item ("I feel safe in my school").

Exhibit 1. Characteristics of Sequoia High School survey respondents and non-respondents, 2011-12

	Survey Respondents		Non-Respondents	
	N	%	N	%
Gender				
<i>Male*</i>	766	48%	265	57%
<i>Female*</i>	840	52%	203	43%
Ethnicity				
<i>Latino*</i>	896	56%	309	66%
<i>White*</i>	534	33%	106	23%
<i>Other</i>	176	11%	53	11%
Parent Education				
<i>No High School</i>	413	26%	136	29%
<i>High School Graduate</i>	494	31%	166	35%
<i>College Graduate*</i>	524	33%	98	21%
Grade Level				
9*	454	28%	97	21%
10	459	29%	116	25%
11	399	25%	96	21%
12*	294	18%	159	34%
English Learner*	301	19%	171	37%
Free/Reduced Price Lunch*	772	48%	252	54%
Special Education*	183	11%	93	20%
Total Students	1,606		468	

Note: An asterisk (*) indicates that the difference between non-respondents and respondents in this category is statistically significant.

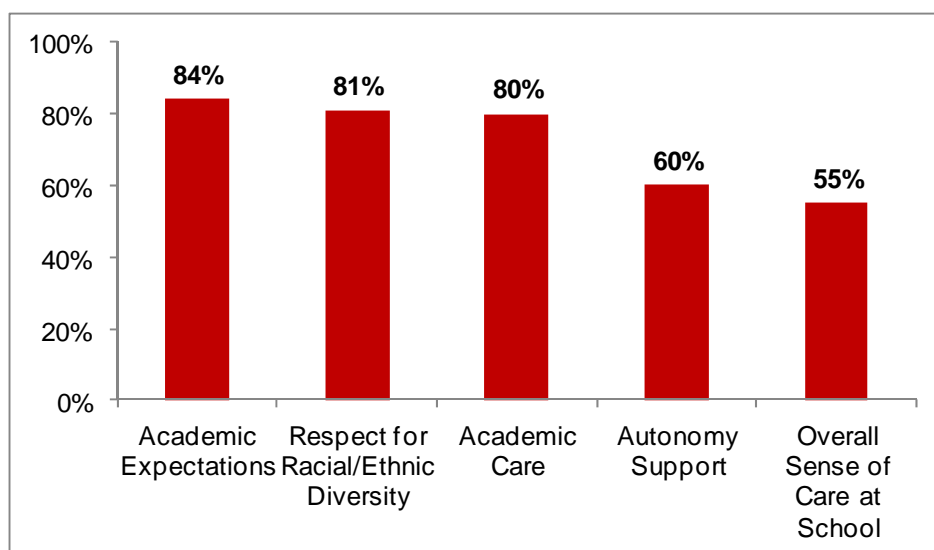
Summary of key school climate measures

In this brief, we report results on five scales salient to the work of teachers, administrators, and other school personnel at Sequoia High School. These are students' perceptions of: *Academic Care*, *Academic Expectations*, *Autonomy Support*, *Respect for Racial/Ethnic Diversity*, and *Overall Sense of Care at School*. We highlight these scales because, relative to the other scales in the survey, the questions that comprised these measures were the most internally consistent with one another. That is, they elicited reliable responses and were accurate estimates of the five school climate dimensions mentioned above. In the Appendix, we describe what these five scales measure, summarize the questions that correspond to each scale, and report the average response rates, as well as how students responded to each item.

In Exhibit 2, we report the percentage of students who responded *true* or *very true* (on average) to each domain; these are the students who had an average above 4.5 out of 6 on the scale. In all, we found that a majority of students reported positive experiences at Sequoia High School. For instance, respondents strongly perceived that adults in the school held high academic expectations

for them (84%). They also experienced a sense of respect for racial and ethnic diversity on campus (81%), and felt cared for academically by their teachers (80%). By contrast, fewer respondents (60%) felt supported at Sequoia High School to express their concerns and exercise their decision-making skills (i.e., autonomy support), and fewer still (55%) felt there was a strong overall culture of care.

Exhibit 2. Percent of students reporting "true" or "very true," all respondents 2011-12

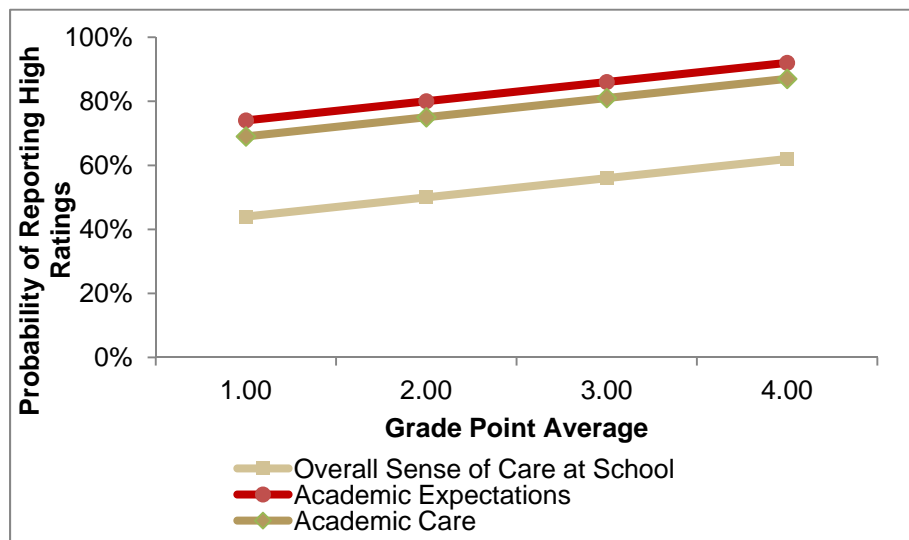


Factors associated with students' perceptions of Sequoia High School

To determine whether students' background characteristics (e.g., course grades, gender) were associated with their reporting on key school climate measures, we used a series of statistical regression models that enabled us to isolate the relative predictive power of particular factors. We posited that the likelihood of students reporting high positive ratings (i.e., an average above 4.5 on the six-point scale) on their perceptions of *Academic Care*, *Academic Expectations*, *Autonomy Support*, *Respect for Racial/Ethnic Diversity*, and *Overall Sense of Care at School* depended on their demographic traits, academic, and disciplinary backgrounds.

Our analyses revealed a number of factors related to students' perceptions of the school climate at Sequoia High School. First, we found that students' grades were linked to high average ratings on their perceptions of *Academic Care*, *Academic Expectations*, and *Overall Care at School* (see Exhibit 3). Estimates showed that, on average, for every grade point increase in students' GPAs, the probability of reporting high ratings on these three scales increased by six percentage points. For example, moving from a 3.0 to a 4.0 grade point average increased a student's probability of reporting high average scores on their perceptions of *Academic Expectations* (e.g., "At my school, there is a teacher or some other adult who tells me when I do a good job") from 86% to 92%.

Exhibit 3. Difference in probability of reporting high average ratings by grade point average on students' perceptions of *Academic Care*, *Academic Expectations*, and *Overall Sense of Care at School*, all respondents 2011-12



In addition to students' course grades, we discovered that their gender, grade-level, and disciplinary backgrounds influenced how they responded to particular school climate measures (see Exhibit 4). Examining students' perceptions of *Overall Sense of Care at School*, we found that males, students with at least one suspension (versus no suspensions), and students enrolled in the 11th grade (versus in the 12th grade) were less likely to report high average ratings. Similarly, when examining students' perceptions of *Autonomy Support*, 11th graders and individuals with one or more suspensions were nine percentage points less likely than their counterparts to report high ratings. Finally, we found that males were four percentage points less likely than females to report high average ratings on their perceptions of *Academic Expectations*.

Exhibit 4. Probability of reporting high average ratings by gender, grade-level, and disciplinary background on students' perceptions of *Overall Sense of Care at School*, *Autonomy Support*, and *Academic Expectations*, all respondents 2011-12

	Overall Sense of Care at School	Autonomy Support	Academic Expectations
Gender			
Male	52%	n.s.	82%
Female	58%	n.s.	86%
Disciplinary Background			
At Least 1 Suspension	45%	51%	n.s.
No Suspensions	56%	60%	n.s.
Grade Level			
11	42%	53%	n.s.
12	59%	62%	n.s.

Note: n.s. = statistically non-significant findings.

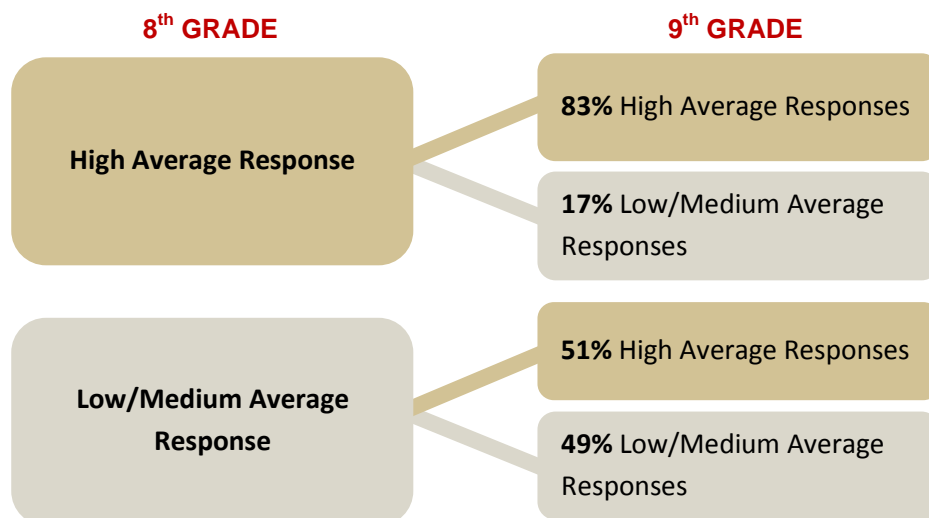
Changes in students' perceptions of *Overall Sense of Care at School* during the middle-to-high school transition

Transitioning to high school is a critical point in students' educational careers. Students generally move from closer-knit contexts to larger, more populated, and competitive high school settings, which translate into fewer opportunities for personal contact between educators and students (Herlihy, 2007). For many youth, the middle-to-high school transition can be filled with anxiety and stress and have significant influence on their social, emotional, and academic well-being (Hertzog & Morgan, 1997). Understanding the extent to which students' perceptions of *Overall Sense of Care at School* shift during this period may inform efforts designed to ease the transition from 8th to 9th grade.

Using the Youth Data Archive, we investigated the cohort of students who matriculated from RCSD to Sequoia High School in 2011-12 and who completed school surveys both in the 8th and 9th grade. This cohort of students ($n = 275$) made up about half of the overall freshman class in Sequoia High School ($n = 551$). Relative to students not in this cohort, these students were more likely to be female, come from higher-educated households, and were less likely to be White.

We found that 83% of those 8th graders who had high average responses on their perceptions of *Overall Sense of Care at School* continued to report high positive ratings when they transitioned to Sequoia High School (see Exhibit 5). By contrast, among youth who had low/medium average responses in RCSD during the 8th grade, 49% remained in the low/medium category and 51% moved into the high category when they matriculated to Sequoia High School. Through a series of regression-adjusted models that accounted for the influence of a range of student background characteristics (e.g., achievement level, English fluency, socioeconomic status), we discovered that students with at least one suspension in 9th grade and students of other ethnicities (non-white, non-Latino students) in this cohort were less likely to report perceiving a strong culture of care at Sequoia High School.

Exhibit 5. Students' perceptions of *Overall Sense of Care at School* in the 9th grade by their 8th grade response on the same scale



Summary

Present findings suggest that students' demographic, academic, and disciplinary backgrounds are related to how they perceive various aspects of the school environment at Sequoia High School. We found that:

- as students' grade point averages increase, so too does the likelihood that they will report high average ratings on their perceptions of *Academic Expectations*, *Academic Care*, and *Overall Sense of Care at School*;
- female students were more likely than males to report high ratings on their perceptions of *Overall Sense of Care at School* and *Academic Expectations*;
- 11th graders, relative to seniors, were less likely to report high average ratings on their perceptions of *Overall Sense of Care at School* and *Autonomy Support*; and
- students with at least one suspension were less likely to report high average ratings on their perceptions of *Overall Sense of Care at School* and *Autonomy Support*.

Additionally, we discovered that the transition from middle to high school had less influence on those students who reported high average ratings on their perceptions of *Overall Sense of Care* during middle school, in that many continued to report positive traits in the school environment when they transitioned to Sequoia High School. Among those who reported low/medium average ratings in the 8th grade, about equal numbers moved into the high category or remained in the low/medium category. In this cohort, students with at least one 9th grade suspension as well as non-White and non-Latino students were less likely to report high average responses on this scale at Sequoia High School.

Implications

This study provides descriptive information that teachers, school administrators, and district leaders in the Redwood City and Sequoia Union High school districts can use to engage in discussions about the importance of school climate issues. Although the present analysis is limited in that it is based on survey results from only one year, the findings nonetheless demonstrate variations among students' perceptions of different dimensions of the campus environment, where males, 11th graders, and students with at least one suspension reported fewer positive experiences compared to their counterparts. Given these findings, implementing new practices and routines to help increase the engagement of these (and all) students may be warranted. These efforts can happen at the individual (student), setting (schools or classrooms), or system (school district or community) levels.

Implementing supports in a comprehensive manner is essential to addressing school disengagement in multiple contexts. For instance, research has found that, at the individual and setting levels, strategies focusing on relationship-building between adults and students (e.g., student-teacher mentorships); promoting student autonomy (e.g., enabling student choice in the classroom); and communicating high expectations of performance to all students regardless of their demographic, disciplinary, or achievement backgrounds have been successful in improving school climate (e.g., Delpit, 1995; Goodenow, 1993; Patrick, Ryan, Kaplan, 2007). District and school policies play a critical role in encouraging teachers to promote these youth development practices

and in supporting them to gain the necessary knowledge, tools, and skills to positively influence the school climate.

Further, the finding that 11th graders report fewer positive experiences than other grade levels may encourage teachers and administrators to focus on these students at the school-level, bolster the support structures available to 11th graders, and identify the potential points for intervention to increase their positive perceptions of the school climate. Often, schools focus their efforts on supporting students during the 9th and 10th grades, and then again in the 12th grade to ease transitions into and out of high school; as a consequence, 11th grade students may not have access to as much support. During the 11th grade, some students are busy taking college entrance exams (e.g., SATs), enrolling in honors or Advanced Placement courses, or participating in a variety of electives such as drama, sports, and campus clubs in addition to working part-time. These students may feel overwhelmed or stressed, and require additional support from school personnel or other adults to prevent burnout from school. By contrast, other 11th graders may realize that they have not kept up their grades at a satisfactory level during their freshman and sophomore years. They may begin to disengage from school thinking they are unable to make up course credits or raise their academic grades to make themselves eligible for graduation or college. In both cases, services at the student-level, such as individualized college and career and mental health counseling, may be warranted. Moreover, early warning system-level approaches that pinpoint and provide vulnerable students with adequate supports before they reach the 11th grade can be critical in enhancing their sense of belonging and success at school. As a follow-up to the present analysis, Sequoia High School has engaged us to help develop an early warning system that helps locate students at risk for negative school outcomes and connect them with appropriate supports.

Many schools and districts across the nation are grappling with school disengagement among various groups of students. In response, a number of schools, districts, and youth-focused organizations are working to devise strategies and interventions that increase students' participation in school. At the state level, for example, there are numerous efforts to increase school engagement and success among boys and young men of color. These initiatives focus on issues including exclusionary school discipline policies, health disparities, alternative education, neighborhood disadvantage, and juvenile justice (<http://www.allianceforbmoc.org/>). As additional survey data from Sequoia High School are made available for future analyses, more nuanced knowledge will be possible and can help guide the work of school officials in the community in more detailed ways.

References

- Battistich, V., Solomon, D., Kim, D., Watson, M., & Schaps, E. (1995). Schools as communities, poverty levels of student populations, and students' attitudes, motives, and performance: A multilevel analysis. *American Educational Research Journal*, 32, 627-658.
- Becker, B.E., & Luthar, S.S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist*, 37, 197-214.
- Cohen, J., McCabe, L., Michelli, N.M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180-213.
- Delpit, L. (1995). *Other People's Children*. New York: The New Press.
- Herlihy, C. (2007). *Toward ensuring a smooth transition to high school*. Washington, DC: National High School Center at the American Institutes for Research. Retrieved from http://betterhighschools.org/pubs/documents/NHSC_TowardEnsuring_051607.pdf
- Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *Journal of Early Adolescence*, 13, 21-43.
- Hertzog, C.J., & Morgan, P.L. (1997). From middle to high school: Ease the transition. *Education Digest*, 62(7), 29-31.
- Kuperminc, G., Leadbeater, B., & Blatt, S. (2001). School social climate and individual differences in vulnerability to psychopathology among middle school students. *Journal of School Psychology*, 39(2), 141-159.
- McNeely, C. & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health*, 74(7), 284-292.
- Newman, B.M., Myers, M.C., Newman, P.R., Lohman, B.J., & Smith, V.L. (2000). The transition to high school for academically promising, urban, low-income African American youth. *Adolescence*, 35, 45-66.
- Patrick, H., Ryan, A.M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, 99(1), 83-98.
- Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal*, 38, 437-460.
- Weinstein, R.S. (2002). Overcoming inequality in schooling: A call to action for community psychology. *American Journal of Community Psychology*, 30, 21-40.

Appendix: Responses to the 2011-2012 Sequoia High School survey

Scale	Average Response Rates (scale of 1-6)	Survey Item Number	Survey Question	Very Untrue, Untrue	A Little Untrue, A Little True	True, Very True
Academic Care <i>(refers to students' beliefs that their teachers are responsive to their academic needs)</i>	4.95	26	My teachers are available during non-class time to answer questions to assist me in my studies.	2%	16%	82%
		30	My teachers help me when I have trouble with the work.	2%	12%	85%
		38	My teachers go out of their way to help me with my work.	4%	31%	64%
Academic Expectations of School Adults <i>(refers to students' perceptions that adults on campus recognize their strengths and convey to them high expectation beliefs)</i>	5.18	6	At my school, there is a teacher or some other adult who believes that I will be a success.	2%	11%	87%
		10	Sequoia teachers have high academic expectations for all students.	2%	17%	81%
		23	At my school, there is a teacher or some other adult who always wants me to do my best.	2%	8%	90%
		28	At my school, there is a teacher or some other adult who tells me when I do a good job.	2%	16%	81%
Autonomy Support <i>(refers to students' perceptions that there are opportunities for them to contribute and participate in meaningful ways)</i>	4.62	8	Adults at this school act on students' concerns.	5%	29%	66%
		13	Adults at this school listen to students' concerns.	4%	28%	68%
		24	The principal at this school asks students about their ideas.	13%	36%	51%
		35	I have many opportunities to make decisions at my school.	4%	19%	77%
Respect for Racial/Ethnic Diversity <i>(refers to students' perceptions that the school environment is respectful of racial/ethnic diversity.</i>	5.00	5	Students at Sequoia respect students of different racial and ethnic groups.	4%	23%	73%
		21	Adults at Sequoia respect students of different racial and ethnic groups.	3%	12%	85%

Scale	Average Response Rates (scale of 1-6)	Survey Item Number	Survey Question	Very Untrue, Untrue	A Little Untrue, A Little True	True, Very True
		22	There are many friendships between students of different racial and ethnic groups at Sequoia.	3%	17%	81%
Overall Sense of Care at School <i>(refers to students' beliefs that there is a culture of care and mutual respect among students and staff)</i>	4.56	12	Students in this school help each other, even if they are not friends.	7%	38%	55%
		17	People care about each other in this school.	4%	29%	67%
		36	My school is like a family.	15%	37%	48%
		41	Teachers and students treat each other with respect in this school.	4%	18%	78%

The authors would like to acknowledge our partners at the Redwood City School District and Sequoia Union High School District for contributing data to this project and providing valuable feedback and guidance.

John W. Gardner Center for Youth and Their Communities

Stanford Graduate School of Education
365 Lasuen Street, Third Floor
Stanford, CA 94305-2068

650.723.3099
gardnercenter@stanford.edu
www.gardnercenter.stanford.edu