Center for Research, Evaluation and Assessment

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Supporting Black Student Achievement in

Nevada: Opportunities for Growth

FINAL REPORT

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Bradley D. Marianno, Ph.D.

Patrice Leverett, Ph.D.

Mark Spinrad, Ph.D.

Vanessa Vongkulluksn, Ph.D.

University of Nevada, Las Vegas

Center for Research, Evaluation, and Assessment

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EXECUTIVE SUMMARY

The educational achievement of the nation's Black student population remains a key focus of policymakers and educators alike. In Nevada, the public education system currently educates 56,903 Black students, comprising 11 percent of the state's student population (Nevada Report Card, 2021). Much of the narrative of Black student achievement in the state focuses on the gaps in achievement levels between Black students and their White peers. For example, on the 2019 National Assessment of Educational Progress (NAEP) exam, 14% of the state's Black fourth graders scored proficient on the math exam compared to 40% of White fourth graders (Nevada Report Card, 2019). Missing from these important conversations, however, are discussions focused on the Nevada communities that are supporting Black student success in measurable ways. The purpose of this research study is to first, uncover "pockets of excellence," defined as schools in the state of Nevada where Black students are making marked growth in achievement. To that end, this study aims to answer the following questions:

Research Questions

- 1. How has Nevada students' English Language Arts (ELA) and Math SBAC achievement grown over time (2016-17 to 2021-22)?
- 2. Are there differences in ELA and Math SBAC achievement trends for students in schools with high versus low Black student achievement growth?
- 3. How are school funding structures associated with White vs. Black students' SBAC achievement trends?
- 4. What evidence-based interventions, practices, and activities are schools with high SBAC achievement trends by Black students utilizing to shape Black student achievement?

Methodology

To answer our first three research questions, we relied on academic data from the Nevada Department of Education. These data include student scores on Smarter Balance Assessment Consortium (SBAC) exams. We utilized these data in a series of cross-classified linear growth models that allowed us to estimate student achievement growth by school and race.

Using information from the growth models, we identified 30 schools (shown in Figure 1) that were the most successful as driving Black student achievement growth in Nevada between 2016-17 and 2021-22. We conducted in-depth interviews with 8 school principals at "high-growth" schools and with 2 school principals at "low growth" schools to answer our fourth research question. Interviews lasted approximately 60 minutes and focused on evidence-based, culturally relevant curriculum, interventions, practices, and activities used to support Black students, as well as reflections of overall student achievement goals or initiatives. Interviews were coded for themes across the entire qualitative data set; intercoder reliability techniques were applied to enhance trustworthiness. Findings were then collated, and recommendations based on those findings are presented below.

Results

At Nevada elementary schools, students grew at a rate of 38 SBAC points per year in ELA and 28 SBAC points per year in math.

For all elementary schools, Nevada students improved on average 37.16 points in ELA each year. Black students were predicted to score on average 43.82 points lower than White students in the first year in ELA, and the gap between White and Black students widened over time by 3.24 points per year. In terms of math scores, results showed that students on average scored 27.59 points higher each year. Black students on average scored 45.65 points lower in the first year

compared to White students and the gap was predicted to widen with the yearly increase being 5.86 points.

At Nevada middle schools, students grew at a rate of 21 SBAC points per year in ELA and 10 SBAC points per year in math.

For all middle schools, Nevada students improved on average 20.51 points in ELA each year. Black students were predicted to score, on average, 59 points lower than White students in the first year in ELA, though the gap between White and Black students did not widen over time. In terms of math scores, results showed that students on average scored 10.01 points higher each year. Black students on average scored 68.32 points lower in the first year compared to White students and the gap did not widen over time.



Figure 1. Top 30 Nevada schools for Black student achievement growth (2016-17 to 2021-22)

High growth Black student achievement schools paused but did not narrow achievement gap growth in ELA and math.

At elementary and middle schools with the highest Black student achievement growth, students in most minority groups were predicted to make yearly ELA and math gains that are on par with the White student comparison group. This is not the case at schools with the lowest Black student achievement growth, particularly in elementary school math and middle school ELA.

Specialized school funding streams were associated with higher Black student achievement growth and a narrowing of achievement gaps at middle schools but not elementary schools.

We further found that some specialized school funding streams were associated with higher Black student achievement growth at middle schools. Black students in Title I middle schools were predicted to have yearly score increases that were 1.72 points higher in ELA compared to White/non-Title I students. In addition, Black students in middle schools with Zoom funding were predicted to make yearly math score gains that are 4.26 points higher than White students in nonfunded middle schools.

School leaders at high growth Black achievement schools pointed to the need to create a climate and culture that is safe, supportive, and positive and founded on a vision that all students can succeed. This intentional climate and culture permeated four pillars of schools' success in academics, discipline, social-emotional learning, and community engagement.

Interviews with principals at schools where Black students are achieving at high rates yielded insight into how Nevada can best support its Black students (as shown in Figure 2). School leaders highlighted their intentionality in building positive school cultures *inclusive of all students* within stable, consistent environments marked by little turnover, supportive relationships, and clear accountability measures.

Figure 2. Summary of practices for supporting Black student achievement growth from Nevada principals



Principals' emphasis on instilling said culture served as a through line that undergirded other school success elements. Their intentionality was manifest in the way they discussed *academics* as opportunities to include students, cultivating their interest and sense of belonging, as well as their aptitude through cultural relevancy. Their intentionality was evident in the way they discussed school *discipline* and *social-emotional supports* as a way to highlight good behavior and situate misbehavior as teaching and learning opportunities. Their intentionality was finally reflected in the inclusive ways they considered student homes as extensions of school communities and actively *engaged* parents as key players in their child's academic, behavioral, social, and emotional development.

In sum, principals' efforts to raise Black student achievement were supported by four pillars—academics that balance high standards and cultural relevancy, discipline and behavior structures that "catch students being good," social and emotional supports that emphasize relationship building, and community engagement efforts that privileged authentic relationships between the school and home. As one leader told us, "I will say this a million times over. It's all about the relationships that you build."

Recommendations

Nevada can take several steps to support Black student achievement at *all* schools, consistent with the framework presented above.

Ensure that every school has a highly effective, vision-oriented leader.

Efforts to support Black student achievement hinged on a highly-effective, vision-oriented leader that utilized their vision for student learning and growth to create a supportive, safe, and positive climate and culture. Nevada has made strides recently to focus on and grow a teacher pipeline of diverse educators, efforts that include the creation of NSHE Teacher Pipeline Task Force and the Nevada State Teacher Recruitment and Retention Advisory Task Force. A similar statewide effort could be made to focus on and coordinate school principal recruitment and retention. Such a task force can regularly "check the pulse" of the principal profession in the state of Nevada and provide regular recommendations for improving the efficacy of our school leaders, including how to effectively evaluate school leaders and how to provide regular, effective professional learning opportunities. In addition, the coordinating body can work with the state's principal preparation programs to align curriculum to the state's need to create vision-oriented leaders. Finally, such a group could assist in the creation of a teacher leader pathway within the state's districts to ensure that the state is developing quality leaders from within its own teaching ranks.

Maintain and improve specialized school funding streams that devote resources based on student need.

Recent efforts to revise the Nevada plan towards a weighted formula based on student needs fit this recommendation. Nevada should monitor the implementation of the new funding formula to ensure that the weights are established appropriately to meet students' needs. Principals regularly emphasized that their visions for *all* student learning motivated an effort to address student needs individually. By providing resources based on need, Nevada has taken an important step towards improving Black student achievement growth.

Articulate high standards, school rules, and social-emotional learning with cultural relevance.

Nevada school leaders emphasized the importance of communicating high standards to their students, so staff and students knew the expectations for learning. Recently, the Nevada Department of Education has engaged in efforts to define a profile for a Nevada learner (or portrait of a graduate). Following efforts in states like Virginia and Utah, such an undertaking brings stakeholders together from diverse communities to clarify what Nevada students are supposed to know and be able to do following graduation. Making such delimitations can make learning expectations more concrete for students and allow educators to move beyond test preparation to focus more on skill development.

Leaders further articulated that high standards were necessary but not sufficient. They made intentional efforts to infuse cultural relevancy into classroom instruction such that students could "see themselves" at school. Nevada has made recent strides to prepare teachers to instruct with cultural relevancy. For example, multicultural education is now required for educator licensing (AB 234, 2015), and state standards and instructional materials must include individuals from marginalized backgrounds (AB 261, 2021). The state convened the Multicultural Education State Advisory Task Force to help support these efforts. This taskforce along with the state's educational leaders should remain committed to monitoring the implementation of culturally relevant instructional standards and resources in the state to ensure that Nevada continues to make progress in this regard.

Humanize the connection between the home and school.

Our results revealed that principals at high-achieving schools made consistent outreach with families, forging relationships in low-stakes environments and humanizing the connection between home and school. The Nevada Department of Education (NDE) developed and adopted the Family Engagement Framework: Birth through Grade 12 (Framework) in 2021. However, it is entirely possible, even probable, that many Nevada school leaders and teachers are still unaware of the framework and/or lack the resources to engage with the framework more meaningfully to support the home-to-school connection. The state should continue to work with the Nevada Family Engagement Framework Advisory Committee to make the framework more accessible to Nevada educators. They should also work towards building a hub of resources for family engagement to catalyze the efforts of school leaders to build more authentic relationships between home and school.

SECTION 1: INTRODUCTION

The educational achievement of the nation's Black student population remains a key focus of policymakers and educators alike. In Nevada, the public education system currently educates 56,903 Black students, comprising 11 percent of the state's student population (Nevada Report Card, 2021). Much of the narrative of Black student achievement in the state focuses on the gaps in achievement levels between Black students and their White peers. For example, on the 2019 National Assessment of Educational Progress (NAEP) exam, 14% of the state's Black fourth graders scored proficient on the math exam compared to 40% of White fourth graders (Nevada Report Card, 2019). Missing from these important conversations, however, are discussions focused on the Nevada school communities that are supporting Black student success in measurable ways. The purpose of this research study is to first, uncover "pockets of excellence," defined as schools in the state of Nevada where Black students are making marked growth in achievement. In doing so, we seek to formulate a counter narrative to deficit perspectives on Black students and provide evidence that many Black students in Nevada are achieving at high levels (Harper, 2014; Howard, 2015; Kumah-Abiwu, 2022; Noguera, 2003). Secondarily, we seek to understand what evidence-based interventions, practices, and activities these communities are utilizing to support the achievement of their Black students. In doing so, we aim to identify scalable evidence-based supports for Black students that can be utilized throughout the State of Nevada.

Identifying Areas of Excellence in Black Student Achievement Growth

To identify areas of excellence in Black student achievement, we leveraged a panel dataset of Smarter Balance Assessment Consortium (SBAC) scores for all third graders through eighth graders in the state of Nevada from the 2016-17 school year to the 2021-22 school year. The dataset comprised 827,271 student-by-year observations.

To capture student achievement growth, we fitted cross-classified, linear growth models to specify SBAC score trends, accounting for within-school and within-student random effects (Goldstein & Sammons, 1997; Rabe-Hesketh & Skrondal, 2008; Rasbash & Goldstein, 1994). This modeling approach has a few advantages. First, it considers that students bring with them a certain baseline level of achievement that is outside the realm of a school's control. When we think about a given student's achievement level (for example, on an end-of-year exam), we can think of that level being composed of two components—what a student already knew upon entering a school (from out-of-school experiences) and how much more a student learns by attending school. What we want to capture is how much that student learns by attending school—or the unique school effect. One benefit of the growth model is that it separates a given student's achievement level (i.e. how much they know) from their achievement growth (i.e. how much they have learned over time by attending school). Second, the growth model helps leverage the multi-year experience of schooling-that is, it allows us to calculate the achievement rate over multiple grades for a given student. Finally, the cross-classified setup of this model is useful because it accounts for students' unique movement across Nevada's schooling system. In other words, each students' achievement growth is a function of some combination of elementary and middle schools, depending on their enrollment trajectory.

We also added key student- and school-level control variables to the model to see how they help explain student growth in achievement. These include school performance, Title I funding, comprehensive school improvement (CSI) funding, Victory school funding, Zoom school funding, the percentage of minority students at the school, average class size, the percentage of Black students in special education, and the number of all students in special education.

Understanding Best Practices in Supporting Black Student Achievement

Ultimately, the quantitative analysis cannot help us understand what evidence-based interventions, practices, and activities these schools utilize to shape Black student achievement rates.

Therefore, we paired the quantitative analysis with a qualitative inquiry that employed interviews with leaders from identified "high-growth" and "low-growth" schools to locate evidence-based themes across the school sites. Interviews with participants lasted approximately 60 minutes and focused on evidence-based and culturally relevant curriculum, interventions, and activities used at the school, as well as reflections of overall student achievement goals or initiatives. Once transcribed, interviews were inductively coded for themes using phenomenological methodology. Intercoder reliability techniques were applied to enhance the trustworthiness of the interview data (Guba & Lincoln,1989; Carlson, 2010; O'Connor & Joffe, 2020). Recommendations based on those findings are presented in Section Three.

Culturally Responsive Evaluation

The Center for Research, Evaluation, and Assessment adheres to culturally responsive evaluation (CRE) practices. CRE acknowledges that "culturally-defined values and beliefs lie at the heart of any evaluation" (Hood et al., 2015, p. 281). CRE pays attention to the context in which an evaluation will be conducted, including the history, program, and people, and requires that evaluators acknowledge and are conscious of how their own culture shapes the way they frame, plan, and carry-out the evaluation. This also applies to how evaluators analyze data. CRE requires that evaluators engage a diverse stakeholder group during the data collection process. It requires that evaluators consider and are attentive to stakeholder viewpoints when establishing culturally relevant questions to guide the evaluation. Finally, the final report, under CRE, was drafted with the goal of promoting community benefit, positive change, and social justice. CRE principles guided each stage of this evaluation.

This report includes the following:

1. A methods section including the analytical models, the data employed, the interview sample, and the method for analyzing the interview data.

- 2. A results section that identifies schools at which Black students are experiencing a high level of academic success and the evidence-based interventions, practices, and activities utilized to shape Black student achievement rates.
- 3. A conclusion section with recommendations for policy and practice.

SECTION 2: DATA AND METHODS

This study exploring black student achievement in Nevada schools was completed in two parts, driven by quantitative and qualitative methodologies. Quantitatively, we utilized advanced statistical modeling to identify schools with high black student achievement growth as represented by SBAC scores. These quantitative models also discerned how patterns of growth were associated with student- and school-level factors. Qualitatively, using school-specific growth rates identified through statistical modeling, we sought to discern themes of evidence-based interventions, practices, and activities these schools are utilizing to shape Black student achievement rates. The methods for these two strands are described in more detail below.

Data Inclusion

One requirement for modeling the achievement rate over multiple grades is that the underlying test data must be vertically scaled (i.e. a unit increase in a student's test score in grade 1 is the same as a unit increase in a student's test score in grade 3). This is the case for SBAC scores, so we leveraged ELA and math SBAC scores for this analysis. We obtained SBAC scores for every student that took the exam in third through eighth grade in the state of Nevada from 2016-17 to 2021-22 from the Nevada Department of Education. In total, we have 827,271 student-by-year observations. Students are linked over time in these data by a state unique identifier number. We also observe in these data a students' school, ethnicity, and gender.

To improve the estimation of the growth models, we limited our analysis further to only schools with at least 30 enrolled Black students in the baseline year (2016-17). This meant that our

analytic sample included only students enrolled at 207 elementary or middle schools with at least 30 Black students. With only three schools meeting the inclusion criteria in Washoe County, we further limited our analysis to only schools in Clark County School District. We also excluded high schools because high school students do not take the SBAC exam. This yielded a final analytic sample of 204 schools out of the 496 potential elementary and middle schools (41%). This includes 421,125 student-by-year observations, 51% of observations in the database.

To explore how other school characteristics were associated with student achievement growth, we merged in school characteristics from databases maintained by the National Center for Education Statistics (i.e., percentage minority students, Title I status) and by the Nevada Department of Education (i.e., Nevada School Performance Framework (NSPF) Score, Zoom School, Victory School, Comprehensive School Improvement (CSI) School, average class size, the percentage of Black students in special education, and the number of all students in special educaiton). We show school characteristics for the 204 schools and 125,549 students in those schools at baseline (2016-17) in Table 1.

Quantitative Analysis

Our dataset presents a complex nested data structure, with yearly SBAC scores nested within students, who are in turn nested within elementary or middle schools. Hierarchical linear modeling was used to account for possible correlations of residuals and heteroskedasticity due to nesting effects (Raudenbush & Bryk, 2002). Data from elementary and middle school students were fitted separately, in order to examine growth trends at the two developmental periods. Initial data examination showed that about 8% of elementary school students moved elementary schools during the data collection period. Similarly, 7% of middle school students moved middle schools. Crossclassified modeling was used to account for students sequentially belonging to combinations of elementary schools or middle schools. In particular, a cross-classified, linear growth models were fitted to specify SBAC score trends, accounting for within -school and -student random effects (Goldstein & Sammons, 1997; Rabe-Hesketh & Skrondal, 2008; Rasbash & Goldstein, 1994). Each student is specified as belonging to first school j1 and second school j2 (j1 and j2 are the same for those who did not change schools). The combinations of first and second schools were also accounted for in the school-level random effects. Also in the random part of the model is the random effect accounting for yearly SBAC scores nested within each student, with random slopes with respect to grade level to allow for interindividual variations in growth trends. Grade level was specified as the time variable in the linear growth model, centered with grade 3 for elementary school students and grade 6 for middle school students (i.e., representing the intercept). Each students' high school graduation year was used as a covariate to control for differences in scores across grade level.

School	Characteristic	cs (n=204)		
	Mean	SD	Min	Max
NSPF index	52.10	22.84	2.86	97.00
Title I funding	87.92%		0.00	1.00
CSI funding	16.43%		0.00	1.00
Victory funding	8.70%		0.00	1.00
Zoom funding	12.56%		0.00	1.00
Percent Minority	74.10	17.62	32.00	99.15
Average class size	23.75	3.24	16.02	38.55
Percent Black students in Special Ed	0.23	0.13	0	0.66
Number of students in Special Ed	-6.28	21.81	-39.41	78.74
(Mean Centered)				
Student C	Characteristics	(n=125,549)		
	Mean	SD	Min	Max
Asian	6.48%		0.00	1.00
Black	15.59%		0.00	1.00
White	21.86%		0.00	1.00
Hispanic	47.36%		0.00	1.00
American Indian	0.35%		0.00	1.00
Multi-ethnic	6.59%		0.00	1.00
Pacific Islander	1.78%		0.00	1.00

Table 1. Characteristics of Analytic Sample at Baseline (2016-17)

With this general analytic strategy, we specified several models in turn to answer our research questions. For RQ1, students of all races were included in order to examine how explanatory variables at the student- and school-levels predicted SBAC achievement trends for all students. The first set of cross-classified linear growth models included students' race as categorical predictors, with White students as the reference group (Models 1E for ELA and 1M for Math). The second set of models included school-level variables including NSPF index, Title I, CSI, Victory/Zoom, percent minority, average class size, percent of special education students who identified as black, and number of all special education students as predictors (Models 2E and 2M). The final set of models included interaction terms for race with time to allow growth slopes to vary for each race (Models 3E and 3M).

For RQ2, we first analyzed SBAC scores of Black students with cross-classified linear growth modeling, specified with individual schools as predictors of SBAC scores. Interactions between school identification and time were also specified. Thus, each school was allowed to have a unique intercept and slope for black students' SBAC achievement trends. This modeling strategy was repeated for both ELA and Math SBAC scores for elementary and middle school samples. Schools were distinguished by the ELA and math SBAC achievement growth rates of their black students using school-specific slope terms (i.e., the interaction terms for schools with respect to time). The school-specific slopes for ELA and math score growth were then separated into quartiles. Schools with slopes in the lowest quartile (< 25 percentile) were classified as having low Black achievement growth (low BA slope) and those in the highest quartile (> 75 percentile) were classified as having high Black achievement growth (high BA slope). For ELA, a model was fitted for students of all races in schools with low BA ELA slopes (Model 4E) and another model was fitted for students in schools with high BA ELA slopes (Model 5E). All student- and school-level predictors were

included. Another two models were similarly specified for math (Models 4M and 5M). Analyses were repeated for elementary and middle school students.

For RQ3, models were intended for examining Black students' achievement relative to those of White students, conditioned on school funding structures (Title I, CSI, Victory/Zoom). Categorical variables were created to represent factorial combinations of race (White vs. Black) and funding (No funding vs. Received Funding). For Title I and CSI, four groups were created: 1) No funding/White (reference group), 2) No funding/Black, 3) Funding/White, and 4) Funding/Black. For Victory/Zoom, six groups were created: 1) 1) No funding/White (reference group), 2) No funding/Black, 3) Zoom/White, 4) Zoom/Black, 5) Victory/White, 6) Victory/Black. These categorical variables were included as predictors as well as in interaction with the time variable. These models thus were able to discern how race and funding combinations may predict both the intercept and slope of SBAC achievement trends.

For RQ4, schools were selected for further qualitative analysis (see below section) based on their intercept and slope parameters garnered in RQ2 representing SBAC achievement trends of Black students within each school.

Qualitative analysis

Ultimately, the cross-classified linear growth model allowed us to identify which schools in Nevada have produced the most growth in achievement for Black students. However, the quantitative analysis did not help us understand what evidence-based interventions, practices, and activities these schools are utilizing to shape Black student achievement rates. Consequently, we paired the quantitative analysis with a phenomenological approach that utilized interviews with leaders from identified schools to locate themes across school sites.

In-depth Interviews with Principals

CREA leveraged findings from the growth modeling analyses to identify schools that meet the criteria of "pockets of excellence," where Black students are making marked growth in achievement. We utilized the school-specific slopes for ELA and math from the growth models to rank schools. We then took the sum of the ELA and math ranks to generate an overall ranking that identified the top 30 schools (out of the 204 that met the inclusion criteria) in Nevada for Black student achievement growth (i.e., high-growth schools), shown in Figure 1. We contacted school principals by email and phone at the 30 schools to invite them for an interview and eight school principals (27%) responded to the request. We also interviewed two school principals at low-growth schools as a comparison. Interviews were conducted through Google Meet or via phone in order to promote maximum accessibility and to mitigate any residual concerns related to the COVID-19 pandemic. Each interview lasted approximately 60 minutes and followed a semi-structured protocol that focused on the following evidence-based and culturally relevant topics: curriculum, interventions, activities used at the school, and reflections of overall student achievement goals or initiatives. See the Appendix for the semi-structured interview protocol.

As Table 2 shows, participating principals, on average, had 21.9 years of experience in the field of education, including time as classroom teachers, learning strategists and administrators. On average, they have worked in CCSD for 19.1 years, including 9.1 years as administrators and 5.1 years as principals at their current schools.

Once interviews were transcribed using a third-party service, transcriptions were inductively coded for themes using phenomenological methodology to understand and describe the universality of a social phenomenon through individuals' lived experiences (Qutoshi, 2018). For example, dialogue was analyzed to understand (a) how each participant conceptualized evidence-based interventions and activities to support Black students, (b) participant beliefs toward and knowledge about culturally responsive education, and c) participant perspectives of the barriers and facilitators to increasing academic achievement for Black students. We also employed thematic analysis techniques to guide coding and develop themes (Hsieh & Shannon, 2005). Deductive codes based on constructs in the interview protocol were used to discern themes of evidence-based

interventions, practices, and activities these schools utilize to shape student achievement rates. All responses were anonymized, so as to exclude names, school names, or any other identifying information. Intercoder reliability, a technique used to bolster the systematicity and transparency of the coding process, was applied to enhance the analytic validity of the data (O'Connor & Joffe, 2020). Findings from the interviews were collated, and recommendations based on those findings are presented below.



Figure 1. Top 30 Nevada schools for Black student achievement growth (2016-17 to 2021-22)

	As an educator	As a CCSD employee	As an administrator	As principal at current school
Average # of years	21.9	19.1	9.1	5.1

Table 2. Aggregate Demographics of Principals Interviewed

SECTION 3: RESULTS

RQ1: How has Nevada students' ELA and Math SBAC achievement grown over time (2016-17 to 2021-22)?

ELA Elementary Schools

For RQ1, cross-classified growth model results showed that Nevada students at elementary schools improved on average 37.20 points in ELA each year (Table 3, Model 1E). To put this growth into context, 37.20 points would take a third grade student from the middle of the SBAC Level 2 (Developing) group to reaching Level 3 (Proficient). This growth rate holds steady, even as we begin to introduce student-level and school-level control variables in subsequent models (Models 2E and 3E).

We further explored in Model 1E how ELA growth varied by student ethnicity, with White students as the comparison group. We found that Asian students were predicted to score 15.76 points higher in ELA compared to White students, whereas students of other races were predicted to score lower compared to White students. In particular, Black students were predicted to score 46.61 points lower than White students, the lowest of any racial group.

In the third model (Model 3E), we allowed both ELA intercept and slope to differ by race (Model 3E). Results showed that Asian students were predicted to score 10.48 points higher than White students in the first year of data collection (e.g., the intercept). The difference also grew larger as the slope (i.e., yearly increase) for Asian students was 5.98 points higher per year relative to those

of White students. Comparatively, Black students were predicted to score on average 43.82 points lower than White students in the first year, and their yearly increase was 3.24 points lower than that of White students. Hispanic students were predicted to score lower than White students on average by 21.94 points in the first year, but their yearly increase was predicted to be similar to the yearly increase for White students.

		Overall		Low BA slope	High BA slope
	Model 1E	Model 2E	Model 3E	Model 4E	Model 5E
Grade	37.20*** (0.15)	37.16*** (0.15)	37.52*** (0.34)	35.85*** (0.65)	42.58*** (0.69)
Grad year	-4.91*** (0.14)	-4.91*** (0.14)	-4.92*** (0.14)	-4.65*** (0.27)	-4.65*** (0.27)
Asian	15.76*** (1.13)	15.81*** (1.13)	10.48*** (1.28)	11.94*** (2.36)	11.71*** (2.35)
Black	-46.61*** (0.80)	-46.62*** (0.80)	-43.82*** (0.90)	-37.09*** (1.79)	-47.33*** (1.78)
Hispanic	-22.07*** (0.68)	-22.09*** (0.68)	-21.94*** (0.76)	-18.39*** (1.46)	-24.98*** (1.51)
American Indian	-35.83*** (3.99)	-35.79*** (3.99)	-34.73*** (4.69)	-24.38** (8.85)	-47.05*** (10.28)
Multi-ethnic	-9.95*** (1.00)	-9.94*** (1.00)	-9.36*** (1.14)	-5.97** (2.17)	-10.85*** (2.29)
Pacific Islander	-17.37*** (1.81)	-17.38*** (1.81)	-17.41*** (2.06)	-14.22*** (3.66)	-15.93*** (4.03)
NSPF index		0.33*** (0.02)	0.33*** (0.02)	0.44*** (0.09)	0.37*** (0.08)
Title I funding		-3.47* (1.59)	-3.66* (1.58)	3.04 (5.13)	-6.17 (5.13)
CSI funding		1.07 (1.17)	1.01 (1.17)	5.32 (3.97)	-2.05 (4.07)
Victory funding		4.31** (1.28)	4.18** (1.28)	2.30 (5.39)	6.23 (4.82)
Zoom funding		0.44 (1.16)	0.45 (1.16)	3.15 (4.15)	-8.56* (3.99)
% Minority		0.20*** (0.04)	0.21*** (0.04)	-0.05 (0.17)	-0.09 (0.11)
Class size		0.79*** (0.21)	0.76*** (0.21)	1.90*** (0.45)	0.95 (1.00)
% Blk Special Ed		6.40* (2.72)	6.42* (2.71)	-2.12 (9.12)	-24.03 (13.59)
All Special Ed		0.15** (0.04)	0.14** (0.04)	0.18 (0.16)	0.22 (0.12)
Asian x Grade			5.98*** (0.69)	5.03 (1.28)	6.47*** (1.27)
Black x Grade			-3.24*** (0.48)	-9.71 (1.00)	-0.10 (1.00)
Hispanic x Grade			-0.16 (0.39)	-1.38 (0.77)	-0.28 (0.80)
Am. Ind. x Grade			-1.17 (2.71)	0.53 (5.40)	-7.09 (6.18)
Multi-eth. x Grade			-0.68 (0.64)	-1.29 (1.24)	-1.90 (1.32)
Pac. Island x Grade			0.07 (1.16)	-1.69 (2.07)	0.19 (2.30)
Intercept	2452.51***	2437.61***	2437.26***		2442.70***
	(1.84)	(2.82)	(2.83)	2420.45*** (9.48)	(9.24)
$\sqrt{\psi}_{ ext{[First ES]}}$	14.30 (1.05)	11.13 (0.98)	11.13 (0.97)	12.47 (1.71)	4.12 (1.79)
$\sqrt{\psi}$ [Second ES]	16.09 (1.14)	15.07 (1.10)	15.09 (1.10)	12.78 (1.93)	14.98 (1.65)
$\sqrt{\psi}$ [Grade]	16.08 (0.29)	16.00 (0.30)	15.9 (0.30)	13.48 (0.72)	15.72 (0.62)
$\sqrt{\psi}_{[ext{Student}]}$	70.82 (0.23)	70.82 (0.23)	70.81 (0.23)	70.68 (0.46)	71.22 (0.46)
$\sqrt{ heta}$ [Residual]	33.79 (0.14)	33.74 (0.14)	33.74 (0.14)	33.64 (0.30)	32.89 (0.30)

Table 3. Cross-Classified Linear Growth Models of ELA SBAC Scores, Elementary School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual.

*p < 0.05, **p < 0.01, ***p < 0.001.

We also explored how ELA growth was associated with school-level predictors, like special state funding programs and school-level performance in Model 2E and Model 3E. In Model 2E, we found that a one unit increase in NSPF index was associated with a 0.33 point increase in ELA score. Students in Victory schools were predicted to score 4.31 points higher in ELA. Students in schools with a higher minority student population were predicted to score higher in ELA such that a one percentage point increase in the number of minority students was associated with a 0.20 point increase in ELA. Further, a one student increase in class size was associated with a 0.79 point increase in ELA. We found that every percentage point increase in the percentage of Black students in special education was associated with a 6.40 point increase in ELA. Every one student increase in the number of students in special education was associated with a 0.14 point increase in ELA. In contrast, students in Title I schools were predicted to score, on average, 3.47 points lower in ELA compared to those in non-Title I schools.

Math Elementary Schools

In terms of SBAC math scores at elementary schools, results showed that students on average scored 24.92 points higher each year (Table 4, Model 1M). Similar to ELA scores, Asian students were predicted to score 22.38 points higher than White students in math, while students in all other races were predicted to score lower compared to White students. Of note, Black students were predicted to score 50.76 points lower compared to White students, again the lowest out of all racial groups.

In the third model, growth trends across racial groups were examined in nuance (Model 3M). Similar to ELA trends, Asian students were predicted to score higher in the first year compared to White students. Their yearly increase was also predicted to be 3.98 points higher than White students. Black students on average scored 45.65 points lower in the first year compared to White students, and the gap was predicted to widen with the yearly increase being 5.86 points lower comparatively. Hispanic students were predicted to score 19.97 points lower than White students in the first year, and the gap slightly widened with the yearly increase being 3.58 points lower for Hispanic students compared to White students.

		Overall		Low BA slope	High BA slope
	Model 1M	Model 2M	Model 3M	Model 4M	Model 5M
Grade	24.92*** (0.15)	24.89*** (0.15)	27.59*** (0.33)	22.28*** (0.66)	32.33*** (0.66)
Grad year	-9.01*** (0.13)	-9.02*** (0.13)	-9.01*** (0.13)	-8.62*** (0.26)	-8.82 (0.26)
Asian	22.38*** (1.08)	22.42*** (1.08)	18.73*** (1.24)	22.94*** (2.49)	20.51*** (2.29)
Black	-50.76*** (0.76)	-50.78*** (0.76)	-45.65*** (0.87)	-40.74*** (1.70)	-49.54*** (1.72)
Hispanic	-23.09*** (0.65)	-23.12*** (0.65)	-19.97*** (0.73)	-16.48*** (1.44)	-22.89*** (1.42)
American Indian	-36.75*** (3.82)	-36.76*** (3.82)	-36.94*** (4.54)	-33.92*** (8.88)	-40.19*** (9.26)
Multi-ethnic	-12.78*** (0.96)	-12.78*** (0.96)	-11.04*** (1.11)	-10.26*** (2.19)	-12.53*** (2.16)
Pacific Islander	-13.27*** (1.73)	-13.28*** (1.73)	-12.92*** (2.00)	-13.58*** (3.67)	-11.73** (4.05)
NSPF index		0.27*** (0.02)	0.27*** (0.02)	0.60*** (0.10)	0.49^{***} (0.09)
Title I funding		-2.71 (1.51)	-2.70 (1.51)	-5.73 (5.33)	0.55 (4.80)
CSI funding		-0.23 (1.12)	-0.27 (1.12)	7.37* (3.38)	8.33 (5.75)
Victory funding		1.91 (1.22)	1.66 (1.22)	-2.07 (3.54)	-0.80 (6.31)
Zoom funding		0.68 (1.11)	0.59 (1.11)	9.05* (3.77)	3.59 (4.35)
% Minority		0.16*** (0.04)	0.17*** (0.04)	0.10 (0.14)	-0.27* (0.13)
Class size		0.08 (0.20)	0.04 (0.20)	0.41 (0.38)	-0.82 (1.00)
% Blk Special Ed		0.47 (2.59)	0.39 (2.59)	-26.38* (10.17)	-21.53 (11.55)
All Special Ed		0.10* (0.04)	0.10* (0.04)	0.19 (0.12)	0.06 (0.17)
Asian x Grade			3.98*** (0.67)	2.68 (1.38)	2.30 (1.28)
Black x Grade			-5.86*** (0.47)	-9.70*** (0.95)	-1.32 (1.00)
Hispanic x Grade			-3.58*** (0.38)	-4.85*** (0.77)	-1.71* (0.77)
Am. Ind. x Grade			0.07 (2.67)	2.08 (5.74)	-1.29 (5.43)
Multi-eth. x Grade			-1.99** (0.63)	-1.56 (1.26)	-1.27 (1.28)
Pac. Island x Grade			-0.39 (1.14)	-0.50 (2.12)	0.44 (2.47)
Intercept	2482.82***	2470.60***	2467.97***		2448.78***
	(1.73)	(2.69)	(2.70)	2456.35*** (8.73)	(10.46)
$\sqrt{\psi_{ ext{[First ES]}}}$	13.60 (1.00)	11.44 (0.95)	11.44 (0.94)	9.77 (1.40)	10.32 (1.74)
$\sqrt{\psi}$ [Second ES]	14.62 (1.06)	13.56 (1.03)	13.57 (1.03)	11.97 (1.65)	13.41 (1.72)
$\sqrt{\psi}$ [Grade]	20.05 (0.23)	19.99 (0.23)	19.83 (0.23)	18.69 (0.51)	20.57 (0.48)
$\sqrt{\psi}_{[ext{Student}]}$	69.39 (0.22)	69.39 (0.22)	69.37 (0.22)	70.57 (0.43)	68.58 (0.43)
$\sqrt{\theta}$ [Residual]	29.80 (0.13)	29.78 (0.13)	29.78 (0.13)	29.27 (0.28)	29.25 (0.28)

Table 4. Cross-Classified Linear Growth Models of Math SBAC Scores, Elementary School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual.

p < 0.05, p < 0.01, p < 0.01, p < 0.001.

In terms of school-level predictors in the second model (Model 2M), a one unit increase in NSPF index was associated with a 0.27 point increase in math. A one percentage point increase in the percentage of minority students was associated with a 0.16 point increase in math. Every one student increase in the number of students in special education was associated with a 0.10 point increase in math.

ELA Middle Schools

Cross-classified growth model results showed that Nevada students at middle schools improved on average 20.85 points in ELA each year (Table 5, Model 1E). This growth rate holds steady, even as we begin to introduce student-level and school-level control variables in subsequent models (Models 2E and 3E).

We found that Asian students at middle schools were predicted to score 22.68 points higher in ELA compared to White students, whereas students of other races were predicted to score lower compared to White students. In particular, Black students were predicted to score 58.45 points lower than White students, the lowest of any racial group.

In the third model (Model 3E), we allowed both SBAC intercept and slope to differ by race (Model 3E). Results showed that Asian students were predicted to score at similar levels as White students in the first year of data collection. The difference also grew larger as the slope for Asian students was 4.79 points higher per year relative to those of White students. Comparatively, Black students were predicted to score, on average, 59 points lower than White students in the first year, but their yearly increase was similar to that of White students. Hispanic students were predicted to score as similar to that of White students. Hispanic students were predicted to score as similar to that of White students. Hispanic students were predicted to score as similar to that of White students. Hispanic students were predicted to score as similar to that of White students. Hispanic students were predicted to score as similar to that of White students.

In Model 2E, we found that a one unit increase in NSPF index was associated with a 0.41 point increase in ELA score. Students in CSI middle schools were predicted to score 3.30 points

higher in ELA. A one percentage point increase in the percentage of minority students was associated with a 0.11 point increase in ELA. Every one student increase in the number of students in special education was associated with a 0.05 point increase in ELA. In contrast, students at Victory middle schools were predicted to score an average of 1.57 points lower in ELA compared to those in non-Victory middle schools. Further, a one student increase in class size was associated with a 1.57 point decrease in ELA.

		Overall	,	Low BA slope	High BA slope
	Model 1E	Model 2E	Model 3E	Model 4E	Model 5E
Grade	20.85*** (0.13)	20.81*** (0.14)	20.51*** (0.27)	16.52*** (0.49)	26.80*** (0.65)
Grad year	-0.37** (0.14)	-0.51*** (0.14)	-0.51*** (0.14)	0.73** (0.28)	0.31 (0.29)
Asian	22.68*** (1.02)	22.41*** (1.03)	3.85 (2.41)	9.64* (4.66)	9.05* (4.61)
Black	-58.45*** (0.80)	-58.69*** (0.81)	-59.00*** (1.91)	-50.70*** (4.06)	-47.02*** (4.10)
Hispanic	-30.79*** (0.64)	-31.25*** (0.65)	-31.15*** (1.42)	-39.42*** (2.65)	-22.38*** (3.23)
American Indian	-30.74*** (3.55)	-30.97*** (3.58)	-31.12** (9.59)	-39.40* (19.43)	-28.58 (22.88)
Multi-ethnic	-9.96*** (0.98)	-10.14*** (0.99)	-10.71*** (2.42)	-10.77* (4.50)	-1.01 (5.37)
Pacific Islander	-23.65*** (1.76)	-23.56*** (1.78)	-15.43*** (4.41)	-20.16* (8.13)	-0.52 (9.27)
NSPF index		0.41*** (0.03)	0.41*** (0.03)	-0.11 (0.19)	0.14 (0.17)
Title I funding		1.88 (1.66)	1.9 (1.66)	10.34 (8.74)	11.73 (11.64)
CSI funding		3.30* (1.28)	3.29* (1.28)	8.29 (10.16)	15.69 (8.60)
Victory funding		-5.28* (2.09)	-5.25* (2.09)	23.38 (13.05)	NA (-)
Zoom funding		0.03 (1.35)	0.06 (1.35)	34.59** (12.51)	-1.57 (5.41)
% Minority		0.11* (0.05)	0.11* (0.05)	-0.71 (0.37)	-1.03* (0.40)
Class size		-1.57*** (0.24)	-1.57*** (0.24)	-1.14 (1.37)	-3.06** (1.02)
% Blk Special Ed		6.32 (4.70)	6.40 (4.7)	-10.67 (19.24)	5.60 (24.16)
All Special Ed		0.05* (0.02)	0.05* (0.02)	0.34** (0.13)	-0.40** (0.13)
Asian x Grade			4.79*** (0.56)	4.66*** (1.10)	2.65* (1.09)
Black x Grade			0.08 (0.45)	-2.21* (0.97)	-1.27 (0.98)
Hispanic x Grade			-0.03 (0.33)	1.58* (0.62)	-1.69* (0.76)
Am. Ind. x Grade			0.03 (2.3)	2.33 (4.72)	-1.93 (5.52)
Multi x Grade			0.15 (0.58)	0.35 (1.08)	-1.51 (1.30)
Pac. Isldr x Grade			-2.11* (1.05)	-2.58 (1.92)	-5.16* (2.22)
Intercept	2457.13***	2436.46***	2437.58***	2443.63***	2412.06***
	(3.31)	(4.18)	(4.29)	(15.54)	(14.28)
$\sqrt{\psi}_{ ext{[First MS]}}$	17.85 (1.96)	14.07 (1.75)	14.06 (1.75)	16.11 (2.19)	15.66 (2.18)
$\sqrt{\psi}$ [Second MS]	19.35 (2.10)	18.25 (2.03)	18.28 (2.04)	21.62 (2.54)	17.03 (2.22)
$\sqrt{\psi}$ [Grade]	9.89 (0.44)	10.44 (0.42)	10.34 (0.42)	10.97 (0.83)	8.96 (1.05)
$\sqrt{\psi}_{[ext{Student}]}$	74.49 (1.03)	75.72 (1.03)	75.58 (1.03)	76.56 (2.06)	72.02 (2.28)
$\sqrt{\theta}$ [Residual]	37.37 (0.13)	36.92 (0.13)	36.92 (0.13)	36.26 (0.26)	36.86 (0.28)

Table 5. Cross-Classified Linear Growth Models of ELA SBAC Scores, Middle School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual. *p < 0.05, **p < 0.01, ***p < 0.001.

Math Middle Schools

In terms of SBAC math scores at middle schools, results showed that students on average scored 9.95 points higher each year (Table 6, Model 1M). Asian students were predicted to score 34.86 points higher than White students in math, while students in all other races were predicted to score lower compared to White students. Black students were predicted to score 69.32 points lower compared to White students, again the lowest out of all racial groups.

In the third model, growth trends across racial groups were examined in nuance (Model 3M). Similar to ELA trends, Asian students were predicted to score higher in the first year compared to White students. Their yearly increase was also predicted to be 9.85 points higher than White students. Black students, on average, scored 68.32 points lower in the first year compared to White students, though the gap was not predicted to widen over time. Hispanic students were predicted to score 31.88 points lower than White students in the first year, and the gap slightly widened with Hispanic students performing 0.97 points lower than White students each year.

In terms of school-level predictors in the second model (Model 2M), a one unit increase in NSPF index was associated with a 0.39 point increase in math. Students in CSI middle schools were predicted to score 3.89 points higher in math. A one student increase in class size was associated with a 1.26 point decrease in math.

RQ2: Are there differences in ELA and Math SBAC achievement trends for students in schools with high versus low Black student achievement growth? ELA Elementary Schools

To answer RQ2, we narrowed our sample to schools where Black student achievement growth was the highest and lowest relative to White students. This allows us to explore whether these schools are uniquely experiencing remarkable Black student achievement growth or whether they are helping all students grow at similar rates. The first models compared schools with low

		Overall		Low BA slope	High BA slope
	Model 1M	Model 2M	Model 3M	Model 4M	Model 5M
Grade	9.95*** (0.15)	10.19*** (0.16)	10.01***(0.31)	4.86*** (0.56)	17.98*** (0.69)
Grad year	-0.67*** (0.16)	-0.62*** (0.16)	-0.64*** (0.16)	-1.63 (0.32)	-0.36 (0.33)
Asian	34.86*** (1.14)	34.68*** (1.15)	-2.24 (2.69)	-4.76 (6.28)	-1.48 (5.34)
Black	-69.32*** (0.87)	-69.19*** (0.89)	-68.32*** (2.14)	-71.24*** (4.30)	-59.94*** (4.64)
Hispanic	-35.20*** (0.70)	-35.51*** (0.71)	-31.88*** (1.58)	-33.10*** (3.01)	-27.71*** (3.39)
American Indian	-36.48*** (3.88)	-36.59*** (3.92)	-39.00*** (10.71)	-63.63** (20.86)	-32.47 (24.61)
Multi-ethnic	-14.83*** (1.08)	-14.86*** (1.09)	-14.43*** (2.7)	-14.61** (5.16)	-10.65 (5.96)
Pacific Islander	-21.00*** (1.92)	-20.65*** (1.95)	-21.85*** (4.91)	-23.89* (9.27)	-23.04* (10.53)
NSPF index		0.39*** (0.04)	0.39*** (0.04)	0.10 (0.15)	0.32 (0.20)
Title I funding		-3.56 (1.82)	-3.46 (1.82)	-6.08 (4.99)	-8.60 (10.21)
CSI funding		3.89** (1.41)	3.88** (1.41)	-0.35 (6.43)	4.16 (11.67)
Victory funding		-1.96 (2.30)	-1.94 (2.3)	NA (-)	NA (-)
Zoom funding		1.44 (1.48)	1.51 (1.48)	NA (-)	0.48 (5.20)
% Minority		0.10 (0.06)	0.1 (0.06)	0.39 (0.22)	0.00 (0.39)
Class size		-1.26*** (0.26)	-1.25*** (0.26)	1.97 (1.10)	-1.11 (0.88)
% Blk Special Ed		9.41 (5.17)	9.48 (5.16)	-42.34 (40.17)	15.79 (22.88)
All Special Ed		0.02 (0.02)	0.03 (0.02)	0.05 (0.06)	0.12 (0.15)
Asian x Grade			9.85*** (0.65)	8.05*** (1.51)	10.72*** (1.31)
Black x Grade			-0.23 (0.52)	-1.38 (1.04)	-2.35* (1.14)
Hispanic x Grade			-0.97* (0.38)	-0.66 (0.72)	-2.76** (0.82)
Am. Ind. x Grade			0.62 (2.62)	8.40 (4.93)	-2.16 (6.12)
Multi x Grade			-0.12 (0.66)	0.07 (1.27)	-0.94 (1.48)
Pac. Isldr x Grade			0.33 (1.2)	-1.64 (2.25)	0.78 (2.61)
Intercept	2472.84***	2454.99***	2455.61***	2474.99***	2408.91***
	(3.41)	(4.48)	(4.6)	(13.06)	(13.83)
$\sqrt{\psi}_{ m [First MS]}$	19.75 (2.15)	16.06 (1.92)	16.04 (1.92)	15.75 (2.28)	20.39 (2.43)
$\sqrt{\psi}$ [Second MS]	17.94 (1.91)	17.26 (1.87)	17.31 (1.88)	17.95 (2.31)	15.69 (2.20)
$\sqrt{\psi}$ [Grade]	19.85 (0.27)	19.88 (0.27)	19.65 (0.28)	20.41 (0.55)	20.85 (0.57)
$\sqrt{\psi}_{[\text{Student}]}$	98.19 (0.96)	97.89 (0.97)	97.31 (0.97)	100.33 (1.95)	97.47 (2.10)
$\sqrt{\theta}$ [Residual]	37.82 (0.13)	37.5 (0.14)	37.5 (0.14)	35.64 (0.28)	37.42 (0.28)

Table 6. Cross-Classified Linear Growth Models of Math SBAC Scores, Middle School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual. *p < 0.05, **p < 0.01, ***p < 0.001.

versus high yearly growth in ELA for Black students at elementary schools (Table 3, Models 4E and 5E). Students in schools with low Black achievement (BA) slopes were predicted to have a 35.85 point yearly increase in ELA, whereas those in schools with high BA slopes were predicted to have a 42.58 point yearly increase. This result suggests that while students in both types of schools

experienced ELA achievement growth, students in schools with high BA slopes grew at higher levels. In addition, the result suggests that schools with high BA slopes also displayed high ELA growth for all students.

Closer examination also showed that first year scores generally mirrored the overall models with respect to race. In schools with low BA slopes, Asian students were predicted to score 11.94 points higher compared to White students, whereas Black students were still predicted to score, on average, 37.09 points lower than White students in the first year, the lowest out of all racial groups. In schools with high BA slopes, Asian students were predicted to score 11.71 points higher and Black students 47.33 points lower compared to White students. Results showed very few slope differences across racial groups for students in elementary schools with high BA slopes and low BA slopes. Students in all minority groups (except Asians) were predicted to make similar gains as the White comparison group at both high BA slope schools and low BA slope schools.

Math Elementary Schools

For math SBAC scores at elementary schools, students in schools with low BA slopes were predicted to have a 22.28 point yearly increase in math, whereas students in schools with high BA slopes were predicted to have a 32.33 point yearly increase (Table 4, Models 4M and 5M).

We found similar results to the ELA trends for first year scores, with Asian students predicted to score higher and other racial groups to score lower compared to White students in both low and high BA schools. However, results for slope differences across racial groups were distinct from the ELA models. Asian students were predicted to have a similar yearly score increases compared to White students in low BA schools and high BA schools. Yearly score increases for Black students were predicted to be lower than those of White students at low BA schools but not at high BA schools. Yearly score increases for Hispanic students were predicted to be lower than those of White students at both low BA schools and high BA schools. That is, while all students were predicted to make significant yearly increases in math scores in high BA schools, the gap between Black and White students did not widen at high BA schools like it did at low BA schools.

ELA Middle Schools

For ELA SBAC scores at middle schools, students in schools with low BA slopes were predicted to have a 16.52 point yearly increase in ELA, whereas those in schools with high BA slopes were predicted to have a 26.80 point yearly increase (Table 5, Models 4E and 5E). This result again suggests that student achievement at schools with high BA slopes grew at higher levels than student achievement at schools with low BA slopes.

We found that Asian students were predicted to score at higher rates than White students at both high BA schools and low BA schools. Black students were predicted to score at lower rates than White students at low BA schools but at similar rates as White students at high BA schools. Hispanic students were predicted to score at lower rates than White students at low BA and high BA schools.

Math Middle Schools

For math SBAC scores at middle schools, students in schools with low BA slopes were predicted to have a 4.86 point yearly increase in ELA, whereas those in schools with high BA slopes were predicted to have a 17.98 point yearly increase (Table 6, Models 4E and 5E).

We again found that Asian students were predicted to score at higher rates than White students at both high BA schools and low BA schools. However, for middle school math, yearly score increases for Black students were predicted to be lower than those of White students at High BA schools but similar to White students at low BA schools. Yearly score increases for Hispanic students were also predicted to be lower than those of White students at High BA schools but not low BA schools. That is, while all students were predicted to make significant yearly increases in math scores at high BA schools, the gap between Black and White students widened at high BA schools but not at low BA schools.

RQ3: How are school funding structures associated with White vs. Black students' SBAC achievement trends?

ELA Elementary Schools

For RQ3, our models examined growth trends for White and Black students in elementary schools with different funding structures. For ELA SBAC scores at elementary schools, Black students in non-Title I schools were predicted to score 50.25 points lower than white students in non-Title I schools (Table 7, Model 6E). Comparatively, Black students in Title-I schools were predicted to score 50.18 points lower than the White/non-Title I reference group. Black students in non-Title I schools were expected to have a yearly score increase that is 5.22 points lower than the White/non-Title I reference group. Black students in Title I schools were expected to have a yearly score increase that is 5.22 points lower than the White/non-Title I reference group. Black students in Title I schools were expected to have a yearly score increase that is 5.20 points lower than the White/non-Title I reference group.

Compared to White students in non-CSI elementary schools, we found that Black students in both CSI and non-CSI elementary schools are predicted to score at lower levels. Black students in non-CSI schools were predicted to score 44.60 points lower in the first year, whereas Black students in CSI schools were predicted to score 40.10 lower (Model 7E). Black students in CSI schools were predicted to score increases compared to White/non-CSI students (by 4.48 points).

In terms of Victory and Zoom funding at elementary schools (Table 8, Model 8E), Black students at Zoom schools were predicted to score 42.95 points lower in ELA compared to White students at non-Victory and non-Zoom schools. Black students at Victory schools were predicted to score 38.51 points lower in ELA compared to White students at non-Victory and non-Zoom schools. Black students in schools with Zoom funding were predicted to make yearly score gains

	ELA		Μ	ATH
	Model 6E	Model 7E	Model 6M	Model 7M
	Title I	CSI	Title I	CSI
Grade	37.72*** (0.61)	37.86*** (0.36)	28.30*** (0.60)	28.17*** (0.35)
Grad year	-4.18*** (0.23)	-4.18*** (0.23)	-8.30*** (0.22)	-8.30*** (0.22)
NSPF index	0.40*** (0.04)	0.40*** (0.04)	0.33*** (0.03)	0.33*** (0.03)
Title I funding	-	-3.57 (2.24)	-	-3.58 (2.14)
CSI funding	1.97 (1.76)	-	2.64 (1.68)	-
Victory funding	5.09** (1.90)	4. 80* (1.90)	1.39 (1.81)	0.95 (1.82)
Zoom funding	1.23 (1.80)	1.06 (1.80)	0.61 (1.73)	0.31 (1.73)
Percent Minority	0.11 (0.07)	0.13* (0.07)	0.07 (0.06)	0.09 (0.06)
Class size	0.55 (0.32)	0.50 (0.32)	-0.14 (0.30)	-0.21 (0.30)
% Blk Special Ed	-0.52 (4.25)	-0.30 (4.26)	-5.70 (4.06)	-5.32 (4.07)
All Special Ed	0.10 (0.06)	0.10 (0.06)	0.08 (0.06)	0.07 (0.06)
No funding/Black	-50.25*** (2.33)	-44.60*** (1.01)	-55.00*** (2.26)	-46.75*** (0.98)
Funding/White	-7.92** (2.49)	-1.43 (2.78)	-8.74*** (2.39)	-1.03 (2.68)
Funding/Black	-50.18*** (2.54)	-40.10*** (2.10)	-52.05*** (2.44)	-39.09*** (2.02)
No Fund/Black x Grade	-5.22*** (1.36)	-3.14*** (0.52)	-7.38*** (1.33)	-5.57*** (0.51)
Funding/White x Grade	-0.05 (0.73)	-2.29 (1.39)	-0.78 (0.71)	-5.82*** (1.35)
Funding/Black x Grade	-3.09*** (0.70)	-4.48*** (0.85)	-6.22*** (0.69)	-8.68*** (0.84)
Intercept	2434.42*** (4.00)	2431.22*** (3.92)	2466.03*** (3.84)	2462.23*** (3.77)
$\sqrt{\psi}_{ ext{[First ES]}}$	10.98 (1.53)	11.40 (1.54)	12.18 (1.39)	12.65 (1.41)
$\sqrt{\psi}$ [Second ES]	16.36 (1.51)	16.20 (1.52)	14.81 (1.43)	14.58 (1.44)
$\sqrt{\psi}$ [Grade]	14.80 (0.54)	14.78 (0.54)	19.67 (0.40)	19.64 (0.40)
$\sqrt{\psi}_{ ext{[Student]}}$	70.50 (0.39)	70.51 (0.39)	69.35 (0.36)	69.39 (0.36)
$\sqrt{ heta}$ [Residual]	34.62 (0.24)	34.63 (0.24)	30.11 (0.22)	30.10 (0.22)

Table 7. Cross-Classified Linear Growth Models of SBAC Scores with Title I & CSI Funding Interactions, Elementary School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual. *p < 0.05, **p < 0.01, ***p < 0.001.

that are 2.53 points lower than White students in non-funded schools and Black students in schools with Victory funding were predicted to make yearly score gains that are 3.17 points lower than White students in non-funded schools.

Math Elementary Schools

We found similar results in math SBAC growth at elementary schools. In terms of Title I,

Black students in both non-Title I and Title I schools were predicted to score lower in the first year

(Table 7, Model 6M) compared to White students in non-Title I schools. The yearly math SBAC

score increases for Black students both in Title I and non-Title I schools were also lower than White students in non-Title I schools. For instance, Black students in Title-I schools were predicted to score 52.05 points lower compared to White/non-Title I students and also to have yearly score increases that were 6.22 points lower.

	ELA	MATH
-	Model 8E	Model 8M
Time	37.57*** (0.36)	27.75*** (0.35)
Grad year	-4.17*** (0.23)	-8.28*** (0.22)
NSPF index	0.40*** (0.04)	0.33*** (0.03)
Title I funding	-3.67 (2.24)	-3.70 (2.14)
CSI funding	2.03 (1.76)	2.69 (1.68)
Percent Minority	0.13* (0.07)	0.10 (0.06)
Class size	0.51 (0.32)	-0.19 (0.30)
% Blk Special Ed	-0.26 (4.25)	-5.13 (4.06)
All Special Ed	0.11 (0.06)	0.08 (0.06)
No funding/Black	-44.80 *** (1.02)	-46.46*** (0.99)
Zoom/White	-8.05* (3.31)	-8.85** (3.20)
Zoom/Black	-42.95*** (2.22)	-46.23*** (2.14)
Victory/White	-4.01 (3.86)	-9.20* (3.72)
Victory/Black	-38.51*** (2.30)	-42.22*** (2.22)
No funding/Black x Grade	-3.23*** (0.53)	-5.92*** (0.52)
Zoom/White x Grade	2.81 (1.81)	1.66 (1.77)
Zoom/Black x Grade	-2.53* (1.02)	-3.97*** (1.00)
Victory/White x Grade	1.14 (2.26)	-1.17 (2.19)
Victory/Black x Grade	-3.17** (1.06)	-7.01*** (1.04)
Intercept	2431.53*** (3.92)	2462.38*** (3.76)
$\sqrt{\psi}_{ m [First \ ES]}$	11.20 (1.53)	12.39 (1.40)
$\sqrt{\psi}$ [Second ES]	16.30 (1.51)	14.81 (1.44)
$\sqrt{\psi}$ [Grade]	14.77 (0.54)	19.67 (0.40)
$\sqrt{\psi}_{[ext{Student}]}$	70.49 (0.39)	69.36 (0.36)
$\sqrt{ heta}$ [Residual]	34.63 (0.24)	30.09 (0.22)

Table 8. Cross-Classified Linear Growth Models of SBAC Scores with Victory and Zoom Interactions, Elementary School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual. *p < 0.05, **p < 0.01, ***p < 0.001.

Similarly, the CSI Model (Table 7, Model 7M) also showed that Black students in CSI and non-CSI schools had first year scores and growth rates that were lower compared to White students

in non-CSI schools. Black students in CSI schools were predicted to score 39.09 points lower in the first year and to have yearly score increases at 8.68 points lower than the White/non-CSI reference group.

In terms of Victory and Zoom funding at elementary schools (Table 8, Model 8M), the results were similar to what we found with ELA. Black students at Zoom and Victory schools were predicted to score lower in math compared to White students at non-Victory and non-Zoom schools. Black students in schools with Zoom and Victory funding were predicted to make lower yearly score gains.

ELA Middle Schools

We found slightly different results at middle schools in ELA (Table 9, Model 6E). The difference in first year levels of ELA performance for Black students at Title I middle schools relative to White students at non-Title I middle schools was predicted to be larger than what we found at elementary schools. However, we found that Black students ELA achievement at Title I middle schools grew by 1.72 points more per year than White students at non-Title I middle schools.

At CSI middle schools (Table 9, Model 7E), we found that Black students ELA achievement grew at similar rates per year compared to White students at non-CSI middle schools, though Black student ELA achievement started 62.18 points lower.

Table 10, Model 8E shows the ELA results for Victory and Zoom funding at middle schools. We found that while Black students at both Zoom and Victory middle schools performed lower compared to White students at non-Zoom and non-Victory schools in the first year, they grew in achievement at similar rates over time.

	ELA		MATH	
	Model 6E	Model 7E	Model 6M	Model 7M
	Title I	CSI	Title I	CSI
Grade	19.20*** (0.45)	20.37*** (0.29)	10.64*** (0.51)	10.07*** (0.32)
Grad year	-0.72** (0.23)	-0.72** (0.23)	-0.88** (0.26)	-0.88** (0.26)
NSPF index	0.40*** (0.05)	0.40*** (0.05)	0.35*** (0.06)	0.35*** (0.06)
Title I funding	-	-0.19 (2.36)	-	-4.83 (2.52)
CSI funding	0.23 (2.07)	-	2.07 (2.21)	-
Victory funding	-1.80 (4.20)	-1.81 (4.20)	-4.21 (4.48)	-4.16 (4.48)
Zoom funding	0.06 (2.37)	0.15 (2.37)	2.78 (2.53)	2.81 (2.53)
Percent Minority	0.10 (0.08)	0.11 (0.08)	0.11 (0.09)	0.12 (0.09)
Class size	-1.37*** (0.38)	-1.37*** (0.38)	-0.65 (0.41)	-0.67 (0.41)
% Blk Special Ed	5.36 (7.67)	5.37 (7.67)	5.90 (8.20)	6.07 (8.20)
All Special Ed	0.04 (0.03)	0.04 (0.03)	0.01 (0.03)	0.01 (0.03)
No funding/Black	-53.84*** (5.64)	-58.70*** (2.12)	-71.83*** (6.12)	-68.16*** (2.32)
Funding/White	-10.35** (3.34)	-11.88* (5.98)	-4.07 (3.65)	3.26 (6.58)
Funding/Black	-66.70*** (3.46)	-62.18*** (4.14)	-72.52*** (3.77)	-66.82*** (4.53)
No Fund/Black x Grade	-2.49 (1.35)	-0.08 (0.50)	-1.64 (1.49)	-0.50 (0.56)
Funding/White x Grade	1.99*** (0.57)	1.75 (1.36)	-1.10 (0.64)	-2.10 (1.52)
Funding/Black x Grade	1.72** (0.59)	1.21 (0.89)	-0.86 (0.66)	0.18 (0.99)
Intercept	2449.19***	2443.02***	2460.10***	2460.01***
	(5.77)	(5.56)	(6.14)	(5.91)
$\sqrt{\psi}_{[\text{First MS}]}$	13.62 (1.93)	13.70 (1.94)	14.82 (2.05)	14.88 (2.05)
$\sqrt{\psi}$ [Second MS]	19.59 (2.28)	19.56 (2.28)	19.49 (2.21)	19.45 (2.21)
$\sqrt{\psi}$ [Grade]	10.93 (0.70)	10.94 (0.70)	19.98 (0.45)	19.99 (0.45)
$\sqrt{\psi}_{[\text{Student}]}$	76.68 (1.75)	76.63 (1.75)	96.86 (1.60)	96.94 (1.60)
$\sqrt{ heta}$ [Residual]	37.24 (0.22)	37.25 (0.22)	36.67 (0.22)	36.67 (0.22)

Table 9. Growth Models of SBAC Scores with Title I & CSI Funding	g Interactions, Middle School Models
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Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual. *p < 0.05, **p < 0.01, ***p < 0.001.

Math Middle Schools

The difference in first year levels of performance for Black students at Title I middle schools relative to White students at non-Title I middle schools was also predicted to be larger in math than what we found at elementary schools (Table 9, Model 6M). However, we found that Black students ELA achievement at Title I middle schools grew at similar rates compared to White students at non-Title I middle schools.

At CSI middle schools (Table 9, Model 7M), we found that Black students' math achievement grew at similar rates per year compared to White students at non-CSI middle schools, though Black students' math achievement started 66.82 points lower.

	ELA	MATH
	Model 8E	Model 8M
Time	20.42*** (0.29)	9.97*** (0.32)
Grad year	-0.72** (0.23)	-0.88** (0.26)
NSPF index	0.40*** (0.05)	0.36*** (0.06)
Title I funding	-0.27 (2.36)	-4.94 (2.52)
CSI funding	0.40 (2.07)	2.35 (2.21)
Percent Minority	0.12 (0.08)	0.13 (0.09)
Class size	-1.38*** (0.38)	-0.67 (0.41)
% Blk Special Ed	4.26 (7.68)	5.06 (8.21)
All Special Ed	0.04 (0.03)	0.01 (0.03)
No funding/Black	-59.35*** (2.05)	-67.51*** (2.24)
Zoom/White	-20.47* (8.18)	-13.14 (8.90)
Zoom/Black	-61.24*** (5.62)	-81.70*** (6.19)
Victory/White	10.03 (19.73)	-17.90 (21.91)
Victory/Black	-50.11*** (10.67)	-60.01*** (11.61)
No funding/Black x Time	0.07 (0.48)	-0.70 (0.54)
Zoom/White x Time	3.23 (1.87)	1.18 (2.06)
Zoom/Black x Time	1.05 (1.27)	4.26** (1.41)
Victory/White x Time	-7.20 (4.59)	-0.77 (5.17)
Victory/Black x Time	-1.45 (2.41)	-2.55 (2.64)
Intercept	2442.96*** (5.56)	2460.57*** (5.90)
$\sqrt{\psi}_{[m First MS]}$	13.90 (1.95)	14.82 (2.05)
$\sqrt{\psi}$ [Second MS]	19.44 (2.27)	19.42 (2.21)
$\sqrt{\psi}$ [Grade]	10.90 (0.70)	19.96 (0.45)
$\sqrt{\psi}_{[ext{Student}]}$	76.59 (1.75)	96.84 (1.60)
$\sqrt{ heta}$ [Residual]	37.26 (0.22)	36.68 (0.22)

Table 10. Growth Models of SBAC Scores with Victory and Zoom Interactions, Middle School Models

Notes. Cell entries are unstandardized parameter (standard error). $\sqrt{\psi}$ represents the estimated standard deviation for each random effect. $\sqrt{\theta}$ represents the standard deviation of the residual. *p < 0.05, **p < 0.01, ***p < 0.001.

RQ4: What evidence-based interventions, practices, and activities are schools with high SBAC achievement trends by Black students utilizing to shape Black student achievement?

Principals from eight of the identified high BA growth schools provided insights on the evidence-based interventions, practices, and activities their schools are utilizing to shape student achievement, as well as their reflections of overall student achievement goals or initiatives. The data is organized according to identified elements of school success, including culture and climate, academics, discipline, social and emotional supports, and community engagement.

Culture and Climate

"I will say this a million times over. It's all about the relationships that you build." "Everything I do is for all of my students."

School leaders highlighted their intentionality in building positive and supportive school cultures. They depicted school environments as effortfully encouraging and founded on inclusive relationship building in which "even when people are down, everybody supports." "[S]ense of culture" is equated with "sense of school belonging [and] sense of family." Supporting school members, then, means "you're on the right route to a positive culture." Emergent patterns in the data suggest positive school cultures, which buoyed stability, inclusivity of all students, and productivity. In one principal's words: "Relationships are key to whatever success we may have experienced...just to create that sense of school belonging, that sense of culture, that sense of family." Principals extended those cultural imperatives to students and families, describing culture building variously as "making sure that teachers and staff see us as a partnership," and families feel "very comfortable in reaching out." As one principal said, "I will say this a million times over. It's all about the relationship that you build. If kids know that you care about them and that you genuinely have a relationship and you know who they are as people and as learners, they will want to do better for you and they will want to make you happy." That relationship, she said, extends to families, as well, explaining "a big part of our culture is just making sure that families feel like their students, when they're here, they're my children. So, I'm going to protect them, and provide them with

everything I would want my children to have."

As a result, most principals described school environments as stable and consistent, marked by little turnover, ongoing relations with parents and students as multiple children in their families matriculate. As one principal said, "There's a lot of positivity and staff know each other. They know the students. They know siblings that come through. They know entire families... So, as far as the relationships, I feel like they're very solid and very positive." In describing the payoff of year-overyear continuity, one principal shared how much it "helps with when we're building something." In her words: "I love creating a vision with my team and then driving towards that, ensuring that we have a culture of accountability here and we're doing our excellence every day that we step through the doors.

Principals further perceived their schools cater to students who "need more support to meet expectations," especially "bubble students." This, all infer, drove high achievement, rather than intentional interventions, practices, and activities specifically for Black students. While several principals shared about how they consider Black students, especially as it pertains to punitive disciplinary concerns (Cheng, 2019; U.S. Department of Education, 2016), classroom representation (Egalite et al., 2015), or complications with parent-school relations (Bridges et al., 2012), respondents said they situated Black student success at their schools within comprehensive, school-wide efforts to address the needs of all students.

When asked about factors or practices that might explain the achievements of Black students at their schools, one principal's response captured this sentiment:

I don't want to sound insensitive, but we're going to hold all kids to the high expectation of their potential. Period...I cannot tell you that I'm doing this one thing for Black kids that I'm not doing for my white kids, for my mixed-race kids, for my Hispanic kids. I can't say I'm doing anything specifically just for the Black kids.

Across the data, principals similarly described efforts to support student success. As another respondent shared:

So I'm going to be really honest. Everything I do is for all of my students. I don't do anything different for my African American students than I would for my Latino students or would for anybody else. So, I think all of the practices that we spoke about throughout this interview are there and meant to be there for my African American students as well."

A third principal echoed, "I don't mean to sound insensitive, but again, I don't care that you are Black, white, Hispanic, Asian. Not that I don't care. Culturally, we need to identify and that's great, but it doesn't matter as far as everybody has this opportunity at success, regardless of race and perceived ability and socioeconomics. We all just need to get kids to learn." A fourth said, "I think it's the supports that we use for all kids. I don't know that we say that it's for the Black kids...I feel like we just really work on building quality relationships with kids," while a fifth reasoned, "It's not necessarily intentional for black students. I look at the real barrier being the socioeconomic inequalities that we have. I feel that's the real barrier."

In reviewing the data, we find that principals perceive their schools as facilitating student success without express consideration for demographics. This finding is bolstered by the quantitative data demonstrating high levels of minority student success across each school. However, it also provides context for how principals perceive achievement as an outcome of interventions and activities targeting all students in need—the proverbial rising tide of progress that lifts all students.

Academics

"We make sure that it's going to connect with all the students, that they see themselves in the lessons that are being taught."

Principals framed academics as a balancing act between aligning curricula with mandated standards and empowering teachers to augment materials with rigorous, culturally responsive curricula that both scaffolds growth and meets students where they are. They also shared superficially about personnel and data usage. For example, most described a variety of key academic supports from on-campus personnel, such as digital literacy coaches, learning strategists, and reading support, to augment instruction and vet or augment curricula for cultural responsiveness. Others shared about online interventions to augment and differentiate learning. All discussed using data to track growth and monitor goals, mainly in collaboration with teachers to assess student achievement and identify intervention needs for low-performing students. However, the richest interview data described the curricular balancing act between aligning with, and teaching to, standards and designing resonant, authentic learning experiences that "meet the needs of your kids, one, and two, to meet the way you teach." As one principal explained, while "most curriculum is being decided for us," she, like the others, gave teachers flexibility of implementation and augmentation. In her words: curriculum "is [just] a tool to put in your toolbox...do what is best for your kids." Another principal described this as, "giving [students] the scaffolds and the supports that they need," then added, "We make sure that it's going to connect with all the students, that they see themselves in the lessons that are being taught." A third put it more plainly, "Are we supporting our standards? How can we incorporate lessons that are going to relate to our kiddos?"

As one principal explained, cultural relevance was a key metric for evolving her school's curricula. She described "attacking" materials that are selected:

"[N]umber one, is it relevant? How important is it? And is it going to resonate with them? Number two, after you've made your selections and you look at your full scope for the year, how many books that you've chosen or are in the curriculum are culturally responsive to our kids? If not, let's start discussing changes."

Discipline and behavior support

"Constructive problem-solving without the constant punitive punishment."

Principals described similar strategies for implementing behavioral expectations and enforcing rules. Typically, school-wide "rules" are explicitly outlined at the beginning of each year, then reiterated throughout the year using simple, consistent language—usually acronyms that align with school mottos or mascots. Teachers, then, build on school-wide "rules" to establish classroom expectations, sometimes collaborating with students to do so. Principals also shared clearly defined discipline plans to facilitate follow through processes when students misbehave. All is communicated with parents, both informing them of expectations and partnering with them to hold their child accountable. As members of the school communities, all administrators, teachers, staff, parents, students are jointly responsible for knowing, modeling, and following the rules. As one principal said, "It's not all rainbows and unicorns over here. I really think it's our teachers, our staff, even my custodian gets in there. It really does take a village, so if there's an issue, we're all going to address it."

Many also use behavioral data to track disciplinary incidents and support corrective actions. For example, some shared how data trends can identify specific areas and times where disciplinary issues occur, allowing them to allocate resources—adding extra staff or reviewing playground rules with students—to curb incidents.

However, the richest data suggested similar approaches to considering and enforcing student discipline. Principals described how their schools emphasize positive, supportive correctives when communicating appropriate behaviors rather than chastising or shaming students. They provide restorative justice opportunities for students to self-reflect and make amends for transgressions. They have, or are in the process of implementing, reward systems that incentivize and highlight good behavior rather than focus on punitive consequences for misbehavior. Detentions or

suspensions are used only in egregious cases, preferring in-house correctives whenever possible over exclusionary discipline that separates students from the classroom and their peers.

One principal stressed the upside of her "go-to" approach to discipline, especially when dealing difficult students. In her words:

"I feel like that's always the first line of defense that we use is that positivity, praising students. There's no better way to get a child to do what you want than to praise a student next to them for doing something really great. That positive little comment can totally change a child's day...be positive, because that cuts off 95% of issues there.

Another principal echoed this sentiment, explaining, "We do a lot of positive words, positive language. We try to reward students for being kind and for going above and beyond. As much as we can focus on proactive rather than reactive, that's really the big push." In this context, correctives, a third said, are framed as opportunities for student development: "When a student can't add four plus four, we teach them, right? So, if a student doesn't know that he shouldn't throw food in the lunchroom, we need to teach them." Across the data, principals subscribed to positive discipline as a means of reducing, if not preventing, problem behaviors. Getting away from retributive measures, a fourth principal said, means "pushing the idea of constructive problem-solving without the constant punitive punishment." By "demonstrating positive things on campus," he said, they are "reiterating expectations" in a constructive manner.

Social and emotional support

"Our mantra is building those relationships with kids."

Principals discussed a variety of social and emotional supports provided to students. Most rely on key support from on-campus "mini mental health" personnel, as one principal said, such as counselors, strategists, behavior mentors, mental health professionals, and social workers; others conduct staff professional development for culturally responsive teaching and social-emotional learning (SEL) or implement various SEL curricula or learning tools to help students recognize and regulate emotions and surveys (or other data) to identify which students need more support. Many credited positive outcomes to non-academic opportunities that incentivize good behavior and support peer relationships, including after-school sports teams, enrichment clubs, arts and music programs, or even unstructured time to socialize during the school day (e.g., recess). In addition to leveraging personnel, providing students with explicit strategies to regulate emotions, and creating social outlets through which students "get to have a real connection" with peers, a common theme in the post-COVID era was cultivating culturally responsive approaches to social and emotional support that emphasize positive reinforcement and relationship building rather than punitive correctives.

One principal cut to the chase when asked about staff attitudes towards students, recentering social and emotional support at her school within a framework of positive relationship building that can bolster self-esteem and foster emotional self-efficacy:

"With our social-emotional learning, it's building the connection. It's building the relationship with students, every student in the classroom...Our students need to feel like they have a positive relationship with their teachers, and they feel safe with their teacher, even if they always don't make the best decisions...What we have seen is that they have more of a positive view of themselves as a student and as a person as well. So that's really showing that our relationships are building value for the students."

She was not the only principal to situate social and emotional support as relationship building that supports emotional maturation. Others similarly cast it as opportunities to build connections with students instead of as means to remediate their deficits (Hoffman, 2009). For example, one principal, when asked about explicit SEL practices, said her school was "trying to infuse that everywhere." In her words: "Our mantra is building those relationships with kids. We do that every day. And so, now we're just looking to deepen those relationships with kids because that's still what we're seeing that they need. So, as far as the relationships, I feel like they're very solid and very positive." Another principal described personal connections fostered via schoolwide efforts. She shared her experiences of watching students recognize difficult emotions but then having the wherewithal to choose constructive way to express themselves. In her words: "I see it in a lot of students when they stop and they breathe and they're thinking, and they're better able to articulate how they're feeling. 'I'm feeling angry, I'm feeling upset, I'm feeling frustrated.' When they calm down, they're able to express how they feel." As added incentive, she explained, staff can recognize and better support students, because "we know how they're feeling and what's upsetting them."

Community engagement

"Making the connections between home and school real."

Principals framed community engagement efforts in a myriad of ways. Several discussed forging partnerships with local businesses or organizations to sponsor programming and provide students with academic support or economic resources. Many shared stories about hosting school events, friendly competitions, and fundraisers that brought school members and families together in low-stakes, non-academic atmospheres. Still others shared general communication strategies newsletters, social media, email, Google surveys, translation apps—that supported efforts to foster communication between school and home. The common theme across the data was the imperative to build authentic relationships with parents in and beyond the classroom, to message to parents that "we are here, and we care." One principal described this as, "making the connections between home and school real."

Authentic connections, she said, builds "love and trust with families" and pays dividends when enlisting support from home. In her words:

Parents can see how we interact with their children and how we love their children. Then when I do have to make the phone call to say, 'Johnny didn't do X, Y, or Z,' or 'Johnny's behavior was this,' they're more likely to believe me, because they have had this other experience with me and my staff. They know that we're not making this up. We're coming from a place of genuine concern.

Another principal similarly emphasized the importance of building bridges between home and school: "We don't have the most successful parents. We don't have necessarily the nicest parents. But because I've built that relationship with them, they come in, they know I'm going to be fair, and they know that I'm going to at least hear them out." However, he, along with several others, stressed the challenges of engaging with parent—often due to language barriers, educational estrangement, or work-life obligations—and detailed the time and energy they invest in building relationships. For example, one principal calls every student's home at the beginning of every school year, especially those of new students because, in his words, "I want them to hear my voice. I want them to know who I am and know that if they have any issues that they can always call. There is a positive, huge positive impact on that...That is a thing that everybody should do." Another described greeting families every day at the school entrance immediately before and after school to "make sure the community knows they can come ask for help or talk with us...get what information we have, ask their questions, and get their answers." In her words: "I am out every morning, and every day after school. I'm at that gate. I'm there to talk to families and say 'Hi.' Whether it's talking about their cars, they're pulling up, or I'm talking about whatever happened in school...It's more just engaging with families and building that trust."

Further Insights into Cultural Responsiveness

To interrogate the above findings, we compared interview data from principals at Nevada schools with high BA growth with interview data collected from principals at two schools that

SUPPORTING BLACK STUDENT ACHIEVEMENT

demonstrated little to no BA achievement growth. Notably, their responses to questions pertaining to cultural responsiveness and evidence-based interventions, practices, and activities—while similar on the surface—reveal superficial implementation choices that contrast with the deliberate, inclusive decision making evidenced in the data of leaders from those top performing schools.

As Table 11 shows, principals at top BA growth schools directly linked efforts to support cultural responsiveness in curricular decisions. They described choosing materials in which "kids can see themselves" or "mak[ing] sure that it's going to connect with all the students, that they see themselves in the lessons that are being taught." Some relied on teams or committees to "pick and hand-select those books...to ensure that they are culturally responsive," while others messaged directly to teachers and students, empowering them to decide. As one principal said, "We're challenging teachers to look at the books, and we're teaching kids, number one, is it relevant? How important is it? And is it going to resonate with them?"

In comparison, principals in the second group offered examples that suggest cursory or glossed over implementation support. For example, when probed for examples, one principal highlighted using one of three available staff development days at the start of school as evidence of her school's commitment to "making sure student discourse [is] really happening in our classrooms." In her words:

Before school even started this year, we started with social emotional and cultural responsive training. And that was an entire day. An entire day because I feel like it's that important...That should tell you just how important that it honestly is to me. So, we have spent just alone an entire day on that. We touched again on cultural responsive teaching, social-emotional learning on our November staff development day.

Similarly, when asked about supporting teachers to develop lessons that might leverage cultural differences in the classroom, another principal suggested "you have to know your kids," which he attributed to daily data-based interactions with students. In his words:

You cannot plan effective lessons and show data that we're looking to see if you don't know

your kids. We do data chats. We're in the middle of data chats right now, so right before

MAP testing. And we are always talking about the kids' data. The kids love to share their

data with myself and our assistant principal.

As such, these differences invite further consideration for the positive relationship between authentic, culturally responsive implementation efforts and the effective facilitation of school cultures and climates with productive student outcomes that prior literature suggest (e.g., Cooper, 2014; Hill, 2009; Mahatmya et al., 2016) and our qualitative findings infer.

	Principals from schools with high student achievement growth
Principal 1	[District-mandated curricula] is a tool to put in your toolboxYou pull the curriculum
	in to help meet the needs of your kidsMake sure that it's going to connect with all
	the students, that they see themselves in the lessons that are being taught.
Principal 2	We're very intentional about[making] sure that we have books that are current. We
	have books that are diverse, that the kids can see themselves in it.
Principal 3	Our librarian works with a team of teachers here on campus that vets books that get placed on our shelves to ensure that they are culturally responsive and meeting the needs of our children. So, we do have a committee in place that does pick and hand-
	select those books and goes through them to ensure that they are culturally responsive.
Principal 4	One of the things we do is choosing appropriate materials for students, and looking at the materials we choose. Recognizing that there can be a female hero. It doesn't have to be a boy. It doesn't have to be a white boy from one community. Your version of what is a typical family is not always the same. It's recognizing and allowing students to see heroes in females, in males, in a Caucasian, in black, in Hispanic, and recognizing that heroes come in all shapes and sizes. The students find ways to go, 'Oh, I relate to that person. I relate to them in not just that we look alike, but maybe we share similarities at home, or we're both coming from a home where my parents are divorced.
Principal 5	I want our students to see themselves in the things that are around them and the adults who serve them and lead them And so it's nice for our kiddos to have those connections with everything inside of our building, being able to find people in stories that look like them and people that sound like them, that speak their language.
Principal 6	I think that what we attacked are the books that are selected. We're challenging teachers to look at the books, and we're teaching kids, number one, is it relevant? How

Table 11. Principals' support for cultural responsive curricula and practices

	important is it? And is it going to resonate with them? Number two, after you've made
	your selections and you look at your full scope for the year, how many books that
	you've chosen or are in the curriculum are culturally responsive to our kids? If not, let's
	start discussing changes.
Principal 7	For our social-emotional learning, we purchased last year, starting last year, a program
	called PATHS curriculum, that we researched with my team, my MTSS chair, and my
	counselor at the time, looked at the demographics and research of social-emotional
	learning programs and we chose a program that showed significant influence on
	students.
Principal 8	That was actually one of the reasons why we selected the curriculum we did. [Redacted]
-	is very much cross-cultural in the modules and the units it provides kids Besides
	[having] the books in the kids' hands, it was the cross-cultural components that we
	really valued in that curriculum.
Principals from schools with low or no student achievement growth	
Principal 9	Like I said, before school even started this year, we started with social emotional and
-	cultural responsive training. And that was an entire day. An entire day because I feel
	like it's that important. We're here for three days and one of the days is taken, so my
	staff can get their rooms ready. That should tell you just how important that it honestly
	is to me. We have spent just alone an entire day on that. We touched again on cultural
	responsive teaching, social-emotional learning on our November staff development
	day.
Principal 10	We do data chats. We're in the middle of data chats right now, so right before MAP
	testing. And we are always talking about the kids' data. The kids love to share their data
	with myself andour assistant principal. They're always We do use Lexia, which is a
	reading program, as a supplemental type of thing. And the kids They level up and the
	kids are always like, 'Mr. [name redacted], I'm on level 12. Oh, Mr. [redacted], I'm level
	this.' And we do Lexia reading challenges

SECTION 4: CONCLUSION-A FRAMEWORK FOR SUPPORTING NEVADA'S BLACK STUDENT POPULATION

We summarize the practices principals' put forward to support Black students in Figure 2.

The school leaders we interviewed in our sample of "pockets of excellence" saw as a precursor to

academic success for Black students, the creation of a strong culture and climate. This is consistent

with prior research that suggests that the academic performance of Black students can be improved

by explicitly combatting harmful environmental and cultural forces (Noguera, 2003).

Recent work on the creation of a climate and culture to support Black students echo the

words of Nevada principals in our sample of "pockets of excellence," where they placed as key to

culture and climate a vision for student learning. Kumah-Abiwu (2022), in a study of Capital

Preparatory Magnet School (CPMS) in Hartford, Connecticut, argued that a supportive climate and

culture is sustained based on vision-oriented leadership, or the idea that *all* students can succeed. The paradox in Nevada's principals' "all student" focus, as described above, is that by focusing on all, school leaders have a vision for and expectation of Black student success, as echoed in the sentiment of this Nevada principal, when they said: "And our expectation of showing growth in every child is why there's so much growth with [our] African American population because we expect growth in every population." Sustained growth in Black student achievement, then, is first and foremost grounded in leadership that can inspire the vision for safe, constructive, rigorous learning environments for all students (Dhuey & Smith, 2014).





In our interviews with Nevada school leaders, it became apparent that these leaders worked hard to create safety and a positive, supportive culture in their schools that aligned with their vision for student learning. Creating a positive, supportive culture is particularly important for Black students as prior research suggests that they perceive their school experience as less favorable than their White peers (Konold et al., 2017; Voight et al., 2015). We found that a positive, supported culture permeated everything at the school. It was manifest in the way school leaders reflected on academics as opportunities to include students, cultivating their interest and sense of belonging, as well as their aptitude. It was evident in the constructive, restorative manner leaders perceived, talked about, and enforced discipline or provided social and emotional supports, preferring to incentivize and highlight good behavior, but also situating misbehavior as teaching and learning opportunities. It was apparent in the inclusive ways they considered student homes as extensions of school communities and actively engaged parents as key players in their child's academic, behavioral, social, and emotional development. All elements of school success—academics, discipline, social and emotional supports, and community engagement—are consistent with cultures described by principals and provides context for student achievement rates at their schools.

Stemming from their supportive climate and culture built on a vision for all students, Nevada principals put forward academic success strategies to improve Black student achievement. School leaders mentioned their approach to academics as balancing act between aligning curricula with mandated standards and empowering teachers to leverage culturally responsive curricula that helps students "see themselves in the lessons being taught." First, these leaders set high academic expectations for students at their school, consistent with research that suggests a positive relationship between academic rigor and student outcomes, including grades and test scores (Cowan Pitre, 2014; Rogers et al., 2014; Taggart, 2018; Valle et al., 2013). The high academic standards create a common shared goal that students, teachers, administrators, and staff members share and work towards (Kumah-Abiwu, 2022). While these high standards are necessary, they are not sufficient. Leaders mentioned the need to infuse cultural relevance into the curriculum, as suggested by multiple studies that correlate culturally responsive curricula, practices, and awareness with increased student engagement and, somewhat less clearly, educational attainment (e.g., Cooper, 2014; Hill, 2009; Mahatmya et al., 2016).

Also connected to their supportive climate and culture, principals described prosocial strategies for implementing behavioral expectations and enforcing rules. They emphasized positive reinforcement and correctives, preferring to incentivize and highlight good behavior rather than focus on punitive consequences. Misbehavior is seen as a teaching and learning opportunity. Several respondents expressly referenced formal culturally responsive, equity-based interventions— restorative justice, Positive Behavior Interventions and Supports (PBIS), and Multi-Tiered System of Supports (MTSS)—whether or not they were officially designated schools. However, all perceived themselves as guiding their schools towards positive climates in which constructive behavioral and disciplinary supports fostered safe, supportive learning environments that uplift and educate students rather than merely punish them (Contractor & Staats, 2014; Davis, 2013). Beyond eschewing deficit narratives (Anderson, 2018), these types of evidence-based interventions have been associated with reductions in disciplinary incidents and potentially narrow the achievement gap (Houchens et al., 2017).

In reviewing the data, we also found that principals perceive social and emotional learning and support as necessarily integrated into their mission, along with academics and discipline. Consistent with the literature, principals highlighted the impact of positive, relational social and emotional support at their schools as a means to enhance students' intra- and interpersonal capacities, as well as cognitive abilities (Ashdown & Bernard, 2012). Unsurprisingly, studies on social and emotional learning infer a favorable relationship between positive, culturally responsive interventions and student outcomes (Hoffman, 2009; Schonert-Reichl, 2017). This is particularly true for marginalized and at-risk students, who, evidence suggests, are empowered by interventions that integrate culturally responsive programming into SEL (Slaten et al., 2016) and that are grounded in diverse sociocultural and linguistic awareness (Garner et al, 2014).

Finally, we found that principals perceived community engagement as integral to student success and beneficial to each school's community, if also challenging to implement. Although all students benefit from parental involvement, research shows that parental involvement for students of color and those from low-income backgrounds significantly impacts their children's school performance (Holcomb-McCoy, 2010). This is consistent with other studies linking parental involvement to positive educational outcomes including higher grade-point averages; increased achievement in reading, writing and math; and academic self-efficacy (Bridges et al., 2012). Yet, parents of minority students often report having limited information from public schools, low levels of self-efficacy, and often are made to feel inadequate or unwelcome (Anderson et al., 2017; Jeynes, 2007; Lee & Bowen, 2006). In contrast, principals at high achieving schools make consistent outreach with families, forging relationships in low-stakes environments and humanizing the connection between home and school.

Recommendations

Nevada can take several steps to support Black student achievement at *all* schools, consistent with the framework presented above.

• Ensure a highly effective, vision-oriented leader at every school

Efforts to support Black student achievement hinged on a highly-effective, vision-oriented leader that utilized their vision for student learning and growth to create a supportive, safe, and positive climate and culture. Nevada has made strides recently to focus on and grow a teacher pipeline of diverse educators, efforts that include the creation of NSHE Teacher Pipeline Task Force and the Nevada State Teacher Recruitment and Retention Advisory Task Force. A similar statewide effort could be made to focus on and coordinate school principal recruitment and retention. Such a task force can regularly "check the pulse" of the principal profession in the state of Nevada and provide regular recommendations for improving the efficacy of our school leaders, including on how to effectively evaluate school leaders and how to provide regular, effective professional learning opportunities. In addition, the coordinating body can work with the state's principal preparation programs to align curriculum to the state's needs. Finally, they could assist in the creation of a teacher leader pathway within the state's districts to ensure that the state is developing quality leaders from its teaching ranks.

• Maintain and improve specialized school funding streams that devote resources based on student need.

Recent efforts to revise the Nevada plan towards a weighted formula based on student needs fit this recommendation. Nevada should monitor the implementation of the new funding formula to ensure that the weights are established appropriately to meet students' needs. Principals regularly emphasized that their visions for *all* student learning motivated an effort to address student needs individually. By providing resources based on need, Nevada has taken an important step towards improving Black student achievement growth.

• Articulate high standards, school rules, and social-emotional learning with cultural relevance.

Nevada school leaders emphasized the importance of communicating high standards, so staff and students knew the expectations for learning. Recently, the Nevada Department of Education has engaged in efforts to define a profile for a Nevada learner (or portrait of a graduate). Following efforts in states like Virginia and Utah, such an undertaking brings stakeholders together from diverse communities to clarify what Nevada students are supposed to know and be able to do following graduation. Making such delimitations can make learning expectations more concrete for students and allow educators to move beyond test preparation to focus more on skill development. Leaders further articulated that high standards were necessary but not sufficient. They made intentional efforts to infuse cultural relevancy into classroom instruction such that students could "see themselves" at school. Nevada has made recent strides to prepare teachers to instruct with cultural relevancy. For example, multicultural education is now required for educator licensing (AB 234, 2015), and state standards and instructional materials must include individuals from marginalized backgrounds (AB 261, 2021). The state convened the Multicultural Education State Advisory Task Force to help support these efforts. This taskforce along with the state's educational leaders should remain committed to monitoring the implementation of cultural-relevant instructional standards and resources in the state to ensure that Nevada continues to make progress in this regard.

• Humanize the connection between the home and school.

Our results revealed that principals at high-achieving schools made consistent outreach with families, forging relationships in low-stakes environments and humanizing the connection between home and school. The Nevada Department of Education (NDE) developed and adopted the Family Engagement Framework: Birth through Grade 12 (Framework) in 2021. However, it is entirely possible, even probable, that many Nevada school leaders and teachers are still unaware of the framework and/or lack the resources to engage with the framework more meaningfully to support the home-to-school connection. The state should continue to work with the Nevada Family Engagement Framework Advisory Committee to make the framework more accessible to Nevada educators. They should also work towards building a hub of resources for family engagement to catalyze the efforts of school leaders to build more authentic relationships between home and school.

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Appendix Semi-structured interview protocol

Thank you for taking time to meet with me today. As a reminder we will be recording today's session for the research team to use only. Do I have permission to record the interview?

This study is exploring ways in which schools can support success for Black students. Your school was selected as demonstrating high levels of academic success. Today, I would like to get a sense of your school climate and academic systems. The interview will take approximately 30-60 minutes. This data will be used to inform statewide practices. Any information that we use from the interview will be listed anonymously, neither your name in the name of the school will be shared in the data. Also, you have the right to discontinue your interview at any time. As a reminder, today's interview will be recorded.

Demographics:

- How long have you been in education?
- Talk about your previous experiences before coming to (school name)
- How long have you been the principal/administrator at this school?

School culture and climate:

- From your perspective, what is it like to be a member of (school name)?
- For a student, what does a typical day look like?
- How would you describe the attitude of staff towards students?
- How would you describe the attitude of students towards staff?
- What traditions or routines do you believe are important to the school's culture?
- What practices did you engage in to develop this culture?

Academics:

- How is learning supported/encouraged in your school?
- How is the curriculum selected at your school?
- What support is offered to teachers in developing lessons?
 - What about support around developing culturally responsive lessons?
- How do you utilize academic data to drive improvement at your school?

Discipline and behavior support:

- How are rules shared with students?
- How are rules enforced?
- What happens when students are having a hard time following the rules?
- What supports are offered to teachers around behavior and discipline?
- How do you utilize discipline data to drive improvement at your school?
- What other practices do you use to support positive behaviors in your school?

Social and emotional supports:

- What social and emotional supports are available to students? (e.g., staffing of social workers, psychologists, etc.)
- Tell me about opportunities students have to socialize and make friends? For example, what activities are students participating in that are not academic (clubs, sports)
- What practice do you utilize to support learners' social and emotional development?

Community engagement:

- How do you engage the community at your school?
 - Query: Family?
 - o Query: Local community members?
- Are there any groups that you are not engaging at this time that you would like to consider in the future?

Black students:

As you know this study is looking at ways to support Black student success:

- What practices are used to support Black students in your school environment?
 - What factors do you think increase the likelihood of Black student success in your school?
 - What factors would you consider to be areas of growth to support Black students in your school?
 - What other practices have you considered implementing that you have not been able to at this time?

Is there anything else we didn't ask that would be helpful in understanding your school or supporting black student success?