

## **Core Practices in Math and Science:**

**An Investigation of Consistently Higher  
Performing School Systems in Five States**

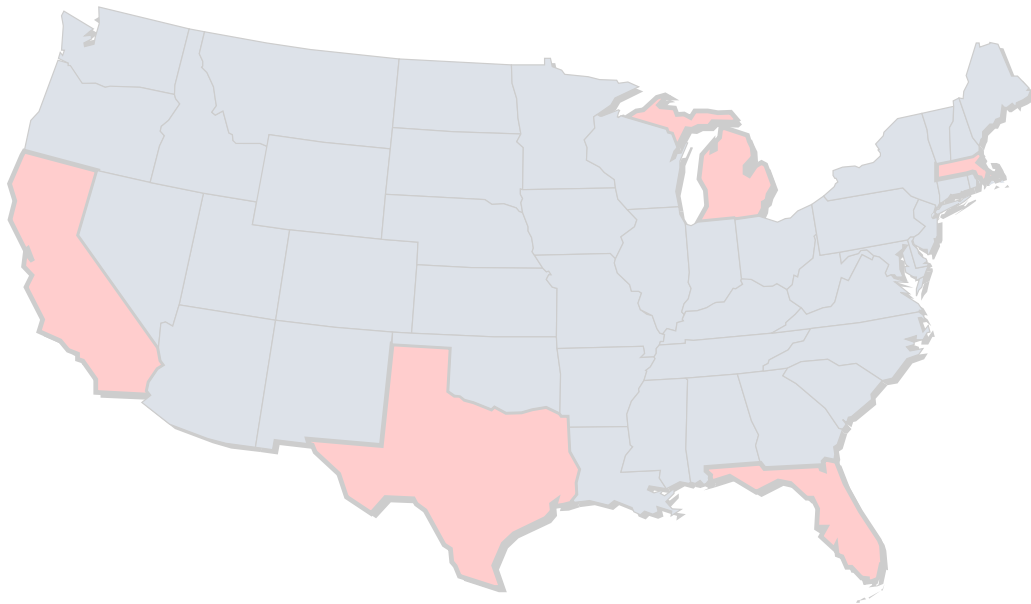


The National Center for Educational Achievement (NCEA) is an ACT-owned non-profit, non-partisan organization. Our goal is to support efforts to reach excellence in education—to raise academic expectations and to promote the practices that will help more students reach college/career readiness. We have been working over the last decade to build a continuous cycle for improvement based on an honest and diligent focus on student performance, the careful examination of effective practices of proven high-performers, and using what is learned to support targeted improvement planning and implementation.

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# Introduction

In the early 1990s, a concern over the quality of public education in the United States gave rise to the education standards movement. Over the past decade, standards-based education dominated the debate about how to improve schools. In addition, much has been written about the need to increase student achievement in math and science. Policymakers, educators, and the business community all warn that increasing foreign competition will threaten the nation's economic competitiveness and national security unless the United States takes immediate steps to regain its scientific and technological competitiveness.

However, evidence suggests that K-12 math and science education may not be preparing U.S. students adequately for success in college and careers. For example, a recent report by the American Institutes for Research and Microsoft (2006) listed a variety of indicators of alarmingly weak student performance in math and science. According to the 2003 Trends in International Mathematics and Science Study (TIMSS), 15 of the 45 countries participating in mathematics and 8 of the 45 countries participating in science outperformed the United States (Gonzales et al., 2004).

Now, more than ever, state departments of education, school administrators, and classroom teachers must focus on what is working for successful schools—essentially, learning to do what works by emulating the practices of higher performing schools and districts (Christie, 2001). The studies on effective school practices overlap in a number of cases, particularly with respect to the need for assessments tightly aligned with clear curriculum standards, improved instructional practice, investment in teachers' professional development, and the need to recognize school successes (Fuhrman & Odden, 2001; Rothman et al., 2002). While these categories of school practice can help start discussions about changes that educators must make, they do not provide any deep examples that effectively guide educators' efforts.

Previous years of NCEA research on the practices of higher performing schools have provided some depth of detail missing from other studies. For instance, in addition to identifying the issue of clear curriculum standards as important for higher performing schools, NCEA researchers also provide examples from those schools to illustrate the principle in practice. The current study builds on this research base, using NCEA's Core Practice Framework to probe into the specific content areas of mathematics and science. By investigating five states (California, Florida, Massachusetts, Michigan, and Texas) in a variety of policy contexts, NCEA researchers developed a rich picture of effective educational programs and the school systems and structures that enable exceptional student achievement in mathematics and science. In addition, NCEA research suggests that school improvement is not a matter of simply encouraging or equipping teachers to teach better. Exploring the roles of various sectors of the school community in school improvement efforts can illuminate important methods of distributing responsibility for a child's education. Thus, this study included participants from the district, school, and classroom levels. The ultimate goal of the current study is to generate information about effective

practices in mathematics and science instruction that promote student achievement in those subject areas. Districts and schools seeking to improve their educational practices will be able to use this information to guide their future improvement efforts.

# Research Methodology

## School Selection

Identification of potential schools for study participation began with the NCEA quantitative research team's analysis of available state-level assessment data in mathematics and science. While standardized assessments and tested grade levels varied by state, all of the five states administered at least one mathematics test and one science test in elementary school, middle school, and high school.<sup>1</sup> For the majority of the states, school assessment data were available through public electronic datasets on the websites of state departments of education. When data were unavailable online, NCEA researchers requested the data from the appropriate state agencies. NCEA researchers also acquired campus demographic information from state departments of education.

In California and Michigan, where the state data indicated only a student's current yearly performance, or "snapshot data," the information available did not reflect improvement, or the lack thereof, over time for individual students. As a result, researchers generated a list of potential schools based on average test scores among students in each grade at a school (California) and averages of students meeting and exceeding the standards at a school (Michigan).<sup>2</sup>

In states that collected longitudinal performance data for each individual student (i.e., Florida, Massachusetts, and Texas in the current study), the research team further distinguished between school levels in the selection and identification process. When selecting middle and high schools, researchers took into consideration the students' preparation in the previous year in each subject area and measured student academic growth against the prediction made based on student demographics and previous test scores.<sup>3</sup> At the elementary level, where federally mandated testing does not start until the third grade, the research team analyzed the data available for students with consecutive enrollment for at least 3 years and measured student performance against predictions based on student demographics.

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<sup>1</sup> The state department in Massachusetts pilot tested the new high school science assessment in 2006 and did not release the collected student data. Therefore, high schools in Massachusetts were identified based only on their mathematics performance over 3 years.

<sup>2</sup> The different averages used in California and Michigan were a result of data availability; the Michigan department of education does not report average scale scores for schools.

<sup>3</sup> In science, if scores were not available in consecutive grade levels as a result of the state testing schedules, NCEA researchers adopted previous math scores to determine student preparation.

Where state data was available, the research team examined student performance on standardized assessments in each targeted state for 3 consecutive school years (2003-04, 2004-05, and 2005-06). The inclusion of such long-spanning data produced a list of candidate schools with relatively consistent student performance levels. To further ensure consistency in the school identification process, NCEA researchers examined the range of performance variance, with schools whose performance varied less across grades and years earning a higher consistency rating. In ranking school performance levels, NCEA researchers used campus demographic information. With schools divided into quartiles based on the percentage of low socio-economic students, candidate schools categorized as higher performing were those that consistently outperformed campuses with similar student populations.

Within the list of candidate schools, the NCEA qualitative research team then identified a smaller number of schools of interest. When selecting schools for study recruitment and participation, researchers considered a school's demographic make-up, size, and geographic location to ensure diversity among participating schools. Whenever possible, researchers selected schools whose percentage of economically disadvantaged students exceeded the state average. In addition, all of the schools selected for participation met the state and federal requirements for Adequate Yearly Progress (AYP) in 2006.

Based on the criteria for school selection, the schools with higher student achievement participating in the study were those "beating the odds" with consistent performance over 3 years, when compared to peer campuses with similar student populations. This approach to school identification does not necessarily yield the "highest performing" schools in a state, as identified solely by test scores. Therefore, a list of the state's highest performing schools across subjects may include campuses different from those selected for this study.

## Data Collection

School recruitment for the current study began in September 2007, after the NCEA research team generated the first list of schools of interest. After gaining consent for a site visit from both district and school administrators, one member of the six-person research team arranged a visitation schedule with a liaison from the targeted school system. Between September 2007 and May 2008, the research team successfully recruited and visited 26 schools in California, Florida, Massachusetts, Michigan, and Texas. Tables 1 through 5 list the 26 school systems studied in the five states. (See Appendix for a brief description and demographic data profile of each participating school.)

Participants in this study included district-level administrators, school administrators, and classroom teachers. In each school system studied, NCEA researchers targeted the following roles for study participation:

- **District Level**
  - Superintendent
  - Curriculum director



- Human resources director
- Professional development director
- Student assessment director
- Special education director
- English language development director

- **School Level**

- Principal
- Academic dean
- Counselor

- **Classroom Level**

- Math teachers
- Science teachers

**Table 1.****School Systems Studied in California**

School	District	School Size	% Economically Disadvantaged
Doig Intermediate School	Garden Grove Unified School District	851	83.7
Hill Classical Middle School	Long Beach Unified School District	1117	81.6
International Elementary School	Long Beach Unified School District	723	98.6
Lawndale High School	Centinela Valley Union High School District	1356	64.5
Los Amigos High School	Garden Grove Unified School District	2182	73.3

**Table 2.****School Systems Studied in Florida**

School	District	School Size	% Economically Disadvantaged
Fairview Middle School	Leon County Schools	830	54.0
King Middle School	Santa Rosa County School District	604	61.1
Tampa Bay Technical High School	The School District of Hillsborough County	1801	65.6
William H. Turner Technical Arts High School	Miami-Dade County Public Schools	1734	88.5

**Table 3.****School Systems Studied in Massachusetts**

School	District	School Size	% Economically Disadvantaged
Excel High School	Boston Public Schools	376	63.8
Graham and Parks School (Middle)**	Cambridge Public Schools	420	36.7
Holyoke High School	Holyoke Public Schools	1256	57.7
Linden School (Middle)**	Malden Public Schools	804	46.1
Pyne Arts School (Middle)**	Lowell Public Schools	446	60.3
Snowden International High School	Boston Public Schools	448	65.6

\*\* These schools serve students in kindergarten through eighth grade, but the NCEA research team identified and studied them based only on student performance in grades 6 to 8.

**Table 4.****School Systems Studied in Michigan**

School	District	School Size	% Economically Disadvantaged
Adams Middle School	Wayne-Westland Community Schools	720	59.9
Coolidge Elementary School	Flint Community Schools	412	75.4
South Haven High School	South Haven Public Schools	802	45.5
Shelby Middle School	Shelby Public Schools	414	51.5
Shelby High School	Shelby Public Schools	481	40.5

**Table 5.****School Systems Studied in Texas**

School	District	School Size	% Economically Disadvantaged
Bonham Middle School	Temple Independent School District	503	57.3
High School For Health Professions	South Texas Independent School District	661	56.7
Perry Middle School	Carrollton-Farmers Branch Independent School District	980	71.5
Roosevelt High School	North East Independent School District	2424	53.5
Rowe High School	McAllen Independent School District	2038	61.2
Spring Oaks Middle School	Spring Branch Independent School District	811	77.3

Data collection techniques employed in the study were primarily qualitative in nature in order to ensure that information gathered would be rich in detail. With a focus on the educational practices described in the NCEA Core Practice Framework, the research team followed established interview protocols and conducted audio-recorded focus groups with classroom teachers and individual interviews with district and school administrators. The interview protocols included follow-up questions appropriate to the focus of the study as a way to generate more in-depth information. To supplement the interview data, the research team also collected pertinent documents, conducted observations of algebra classes, and asked participants to take part in the NCEA *Self-Assessments* online.

## Study Limitations

Although the Math and Science study used a rigorous research design and data collection process, researchers faced two major limitations, both related to school system recruitment. As originally designed, the study was to include both consistently higher performing and consistently average-performing systems in each state. Researchers believed that this approach could help strengthen study findings by identifying core practices that exist only in higher performing systems. The research team generated a list of average-performing schools for recruitment purposes, but was unable to solicit sufficient participation from average-performing school systems.

The other recruitment-related limitation concerns the number of elementary schools visited. Based on the importance of secondary math and science education indicated by the pertinent literature reviewed, and due to the fact that NCEA has already conducted several in-depth studies of practices at the elementary school level, the research team designed the project to include fewer elementary schools than secondary-level schools. Recruitment difficulties in the current study resulted in the inclusion of merely two consistently higher performing elementary schools in the final participant pool.

## Data Analysis

Researchers used qualitative data analysis techniques to review interview and focus group notes, documents, classroom observation notes, and responses to the online *Self-Assessments*. Using the qualitative analysis software Atlas.ti, the research team developed a common code list and practiced coding several common sets of notes in order to establish inter-rater reliability. After establishing reliability within the team, members coded the data collected from their assigned school system, consulted supplementary data sources, and constructed a case study for each school system based on themes emerging from the data.

From the coded interview notes, the written case studies, and the supplementary data, two members of the research team conducted cross-case data analysis to further identify emerging themes common for the majority of school systems included in this report. Due to the limitations on the number of average-performing schools successfully recruited and visited, the cross-case

analysis shifted from the originally comparative focus to a process that was more descriptive in nature and focused on the higher performing school systems.

## NCEA Core Practice Framework

The Core Practice Framework (Figure 1) served as the conceptual framework that informed data analysis for individual cases and across cases. For the past 8 years, NCEA has established a research base consisting of more than 500 school systems. Based on this wealth of data, NCEA staff members developed the Core Practice Framework and have continued to modify it as each research project brings in new insights. The Framework features three primary components: Organizing Themes, Organizational Levels, and School System Practices.

Five Organizing Themes provide the primary structure for studying the practices of consistently higher performing schools: (1) Student Learning: Expectations and Goals, (2) Staff Selection, Leadership, and Capacity Building, (3) Instructional Tools: Programs and Strategies, (4) Monitoring: Compilation, Analysis, and Use of Data, and (5) Recognition, Intervention, and Adjustment. In addition to Organizing Themes, the three organizational levels of every school system—district, school, and classroom—provide a second organizational dimension to The Framework. Fifteen School System Practices make up the primary content of The Framework.

The five Organizing Themes of the Core Practice Framework provide the outline for findings discussed in this cross-case report.

# Study Findings

## Theme 1

### Student Learning: Expectations and Goals

*Embracing the task of preparing students for success in college and skilled careers, educators in consistently higher performing school systems establish clear learning objectives for all students. District and school leaders anchor all academic goals to the requirements for college and career readiness. To attain such ambitious goals, educators develop a rigorous curriculum aligned with state content standards and student needs.*

### College and Career Readiness

In consistently higher performing school systems, preparing students for college education and skilled careers is the focus, not just of high schools, but also of the entire K-12 system. Even while serving a large, high-need student population, educators establish ambitious but attainable goals anchored in the larger objective of college and career readiness for all. Educators understand

# The Core Practice Framework

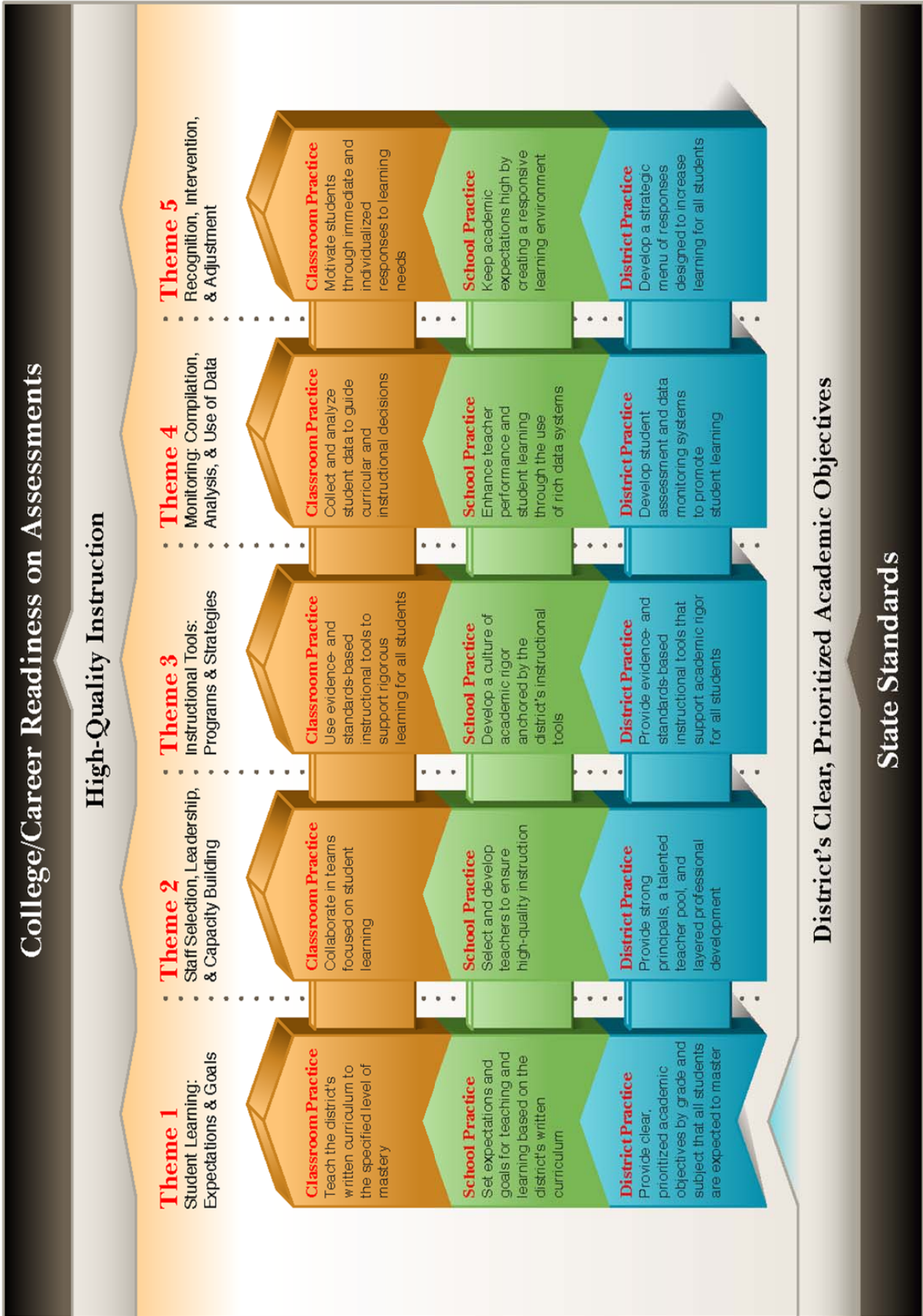


Figure 1

that many students and their parents may not necessarily feel that post-secondary education is a realistic goal. At William H. Turner Technical Arts High School (Miami-Dade County Public Schools, FL), one school leader commented, “College is not always students’ or parents’ top priority upon enrollment, but we work hard to convince them that they should aim for college.” A school leader from Shelby High School (Shelby Public Schools, MI) noted, “While we realize that many things that make the world go around do not require a bachelor’s or master’s degree, we want every student to be prepared and have the opportunity to go on to college or advanced training.” Educators believe that these rigorous academic goals serve to expand opportunities for their students. As an administrator from the Garden Grove Unified School District (CA) explained,

People would say not everybody needs or wants to go to college. It may be true, but any good job requires the same preparation as going to college. Students should be able to choose and leave with the key to decide what door to open. They ought to have the same key...[in order] to go on to 4-year colleges or to technical training that leads to skilled careers.

The adoption of ambitious educational goals is not merely an administrative decision imposed by a district leader. For the majority of the consistently higher performing school systems studied, educators at the district, school, and classroom levels share common student achievement goals. A teacher at Los Amigos High School (Garden Grove USD, CA) noted, “It’s great that the district office has ambitious goals for the students to go to college, because if you don’t raise expectation, students will never try to live up to it.” By communicating goals clearly and involving multiple stakeholders in goal-setting, educators align their goals throughout the school system. As an administrator from Carrollton-Farmers Branch Independent School District (TX) shared, “The district office has a very bold and challenging vision statement of ‘every child college ready without remediation.’ Everyone in the district needs to know the vision and have that end in mind in order to achieve it.” Characterizing school and district goals as aligning readily, a leader from Lawndale High School (Centinela Valley Union High School District, CA) described how the entire school system moved on to the next goal after achieving a district-wide objective:

As we achieved the district’s focus on standards-based instruction and accountability measures, we moved on to the pacing and the rubrics, and now we have a college-going culture focus. This is the goal of the district. There is no way students can go 4 years here and not have had at least a half a dozen people talk to them about going to college, or doing something else beyond high school.

After establishing clear and aligned academic goals, educators ensure that the school and district course offerings promote post-secondary readiness. An administrator in South Haven Public Schools (MI) shared, “It’s a high priority in the district for students to go to college if they can. We are aware of what students need to get into a college program, and opportunities are broad.” For instance, students in all the high schools studied have access to high-level courses, including those that confer college credits such as Advanced

Placement (AP) or dual-enrollment programs. The benefit from enrollment in advanced coursework lies in the fact that, as explained by a leader from Excel High School (Boston Public Schools, MA), “students get confidence from taking AP classes. Even if they only get a 2 on the test, they’ve been exposed to the material, and they know what college-level work looks like.” According to a math teacher at Shelby High School (Shelby Public Schools, MI), this confidence enables students to “get another way to look at options available to them.” Many educators also discussed their constant efforts to get students to think about post-secondary options. A leader from Snowden International High School (Boston Public Schools, MA) explained,

Informally, from day one, students are told that this is a college prep high school, and they are all expected to go to college. They will all be prepared for college. Every day, in every grade, college preparation comes up in some fashion. Many students come to the school not really thinking about college, so it’s important that these expectations are reinforced.

The adoption and attainment of ambitious objectives embedded in post-secondary readiness not only concerns high school administrators and teachers but also involves responsibilities shared by educators from lower school levels. Describing the staff’s dream as enabling “all students [to] have

### Key Findings: College and Career Readiness

In consistently higher performing school systems, preparing students for college education and skilled careers is the focus, not just of high schools, but also of the entire K-12 system. Even while serving a large, high-need student population, educators establish ambitious but attainable goals anchored in the larger objective of college and career readiness for all.

the opportunity to go to college,” a leader at International Elementary School (Long Beach Unified School District, CA) shared how, through the cultivation of positive behaviors and academic performance, “we make sure all the doors that could be opened to our students [are] available to them...If students have the foundation from elementary school and continue on that path, the doors to AP classes in high school will be there for them.”

Many of the middle schools studied share this focus on establishing an early foundation for college and career readiness. For instance, an administrator at Hill Classical Middle School (Long Beach USD, CA) noted, “At the middle school level, students are not really on a path yet. What we want to do is make sure they are ready to get on a path by giving them the foundation here.” Middle school students build

the foundation for high school academics and beyond through measures similar to those used in high school, including awareness-raising regarding college and career readiness as well as enrollment in advanced coursework to earn high school credits or prepare for college-credit-bearing courses. Additionally, middle school and high school educators take advantage of transition meetings to reiterate to 8th-grade students the objectives anchored in post-secondary readiness upon graduation, often in the form of 4-year plans outlining high school coursework aimed at career tracks. According to an administrator at Perry Middle School (Carrollton-Farmers Branch ISD, TX), the high school plan serves the purpose of “[preparing] students so they know their ‘road map’ for what they will take ninth through twelfth grade years.”

With the entire district working towards the same goals, many higher performing school systems go a step further to aim for achievement outcomes beyond the minimum state requirements. Surpassing what the state government requires for conferring the high school diploma, many educators revise their course offerings to focus on college preparation. At Holyoke High School (Holyoke Public Schools, MA), a school leader explained, “We used to have AP, Honors, college prep, and basic courses. We eliminated basic courses a few years ago. Now the standard course is college prep.” In California, all three of the school systems visited offer classes approved by the University of California system and place students into an “A-G” schedule that aligns with the UC requirements.

Going beyond the minimum state requirements is also evident in educators’ focus on goals beyond merely passing state exams. A leader at Excel High School (Boston Public Schools, MA) explained that “we want students to be ready for the ACT/SAT, not just the state test. It’s really important to everyone that students get to college ready to succeed, and without having to take any remedial classes.” Likewise, in the South Texas Independent School District, a leader noted that they expect all students in the district to perform at a higher level than the passing standard for the state test. “Conversations in this district are never focused on accountability standards,” he said. “We want students to attend and *finish* college, not just pass the state test or get accepted to college.”

The emphasis on goals beyond college entrance is in fact common in numerous school systems in this study. For example, in the Long Beach Unified School District (CA), the district office works with higher education partners and business leaders to track student success rates in post-secondary education. A counselor at Snowden International High School (Boston Public Schools, MA) reported that “dropout prevention doesn’t end when students graduate from high school,” so he continues to follow the progress of Snowden graduates and encourages them to finish college.

### **District and School Curriculum**

For educators to assist students to reach ambitious post-secondary goals, a detailed and rigorous curriculum plays an enormously important role. Each of the consistently higher performing school systems studied develops a written curriculum that communicates what students should know and be able to do by grade and subject. Discussing the benefit of strong, clearly communicated curricula, a leader from Bonham Middle School (Temple ISD, TX) said, “The state standards are not clear but very broad and general. So unless you have a very good curriculum that divides them up and talks about the specificity at each grade level and what needs to happen, you will miss them.”

As the state content standards are non-negotiable, curriculum development processes begin with those standards and then build upon them to develop a detailed written curriculum, with supporting documents that help guide instruction. One teacher from the Graham and Parks School (Cambridge Public Schools, MA) observed, “The district-provided materials can be really helpful for new teachers because they provide lots of guidance. New teachers have much



less room to flounder than before.” In fact, the district curriculum assists all teachers, not only new teachers. As a district leader from the Wayne-Westland Community Schools (MI) noted, “Curriculum documents such as pacing guides allow all teachers to know exactly what the expectations are in terms of what they should be teaching, and to keep pace so they don’t fall behind.”

Curriculum documents are highly specific and clear, including information such as learning objectives, evidence of student learning, pacing, scope and sequence, required cognition levels, and knowledge components, all tied to the state standards. In addition, many district offices identify “priority” or “focus” standards during the curriculum process to make classroom teachers’ responsibilities more manageable. While the state and district offices still expect teachers to address all of the standards specified for each subject area, having a prioritized list of standards enables teachers to, according to a teacher from Los Amigos High School (Garden Grove USD, CA), “zero in on those ‘focus standards.’” One district leader from Carrollton-Farmers Branch ISD (TX) described the rationale and process of prioritizing state standards:

**Key Findings:  
District and School Curriculum**

For educators to assist students to reach ambitious post-secondary goals, a detailed and rigorous curriculum plays an enormously important role.

We have to prioritize a smaller number of key standards. It is virtually impossible to get the depth and conceptual understanding with students and cover everything, and we have had a great deal of angst over that...The curriculum online has high priority standards to help guide the teachers. They are identified by the coordinators by using data and multiple criteria. They look at what is most important and most critical to understanding of the course [and] what

students will be held accountable for. They might prioritize areas in which students haven’t historically performed well.

In addition to prioritized standards, educators in many school districts receive further assistance from specific supporting information included in the curriculum materials. For instance, one teacher from Coolidge Elementary School (Flint Community Schools, MI) observed, “The district office will offer resources that align well with state standards. The curriculum documents provided by the district will indicate where and when extra resources are available.” Standards-based support information and resources include lists of pertinent academic vocabulary, corresponding textbook units, suggested instructional activities and strategies, and common assessment tools. The standards-aligned curriculum process includes needs-based revision to enhance student learning. One leader from the Long Beach Unified School District (CA) observed that curriculum development “never ends, and it has to be this way because it’s part of the continuous improvement process. We are constantly looking at how to fill in gaps, to better meet student needs.”

As teachers are in the front line managing student needs and identifying curricular gaps, in nearly all of the school systems studied, strong teacher involvement characterizes the curriculum development and revision cycles. By participating in the curriculum process, teachers help address instructional needs, increase the level of teacher buy-in, and help ensure alignment within

the school system. A leader from the Spring Branch ISD (TX) noted, “Our teachers are really the ones who [develop the curriculum]. It’s a ground-up effort coming from the people who are closest to the students, issues and events happening in the classroom that need to be addressed.” A district leader in the Long Beach Unified School District (CA) said, “The curriculum department is constantly looking at developing materials, based on what the teachers identify that they need, so we’re in constant collaboration with them, and designing and refining what we’ve put out there.”

**Key Findings:  
District and School Curriculum**

In all of the consistently higher performing schools visited, educators at the school and classroom levels further strengthen curricular alignment by ensuring that teachers know the specific role that their grade and subject content play in students’ cumulative educational experience.

Closely connected to teachers’ knowledge of instructional needs is their expertise in student learning. In the Holyoke Public Schools (MA), where educators focus on specialized science education in middle school, a district administrator noted, “Teachers have been driving this reform because they are the experts in the field.” Teacher involvement in many districts’ curriculum development also results in the development of strategies that effectively meet student needs in the classroom.

Teacher involvement in curriculum development and revision also augments confidence and buy-in at the classroom level, which in turn helps ensure consistent curriculum implementation. A district leader from Shelby Public Schools (MI) explained,

With districts our size or smaller, it’s beneficial to use the resources necessary to get all the teachers involved. You would have much greater success in changing what you are ultimately trying to do— instruction in the classroom—because teachers truly have the buy-in to what the district is trying to do.

By taking part in the curriculum cycles, teachers not only increase their confidence in the classroom but also increase their ability to implement the curriculum effectively. For instance, a district leader from South Haven Public Schools (MI) explained, “If teachers create the curricular materials with the district administration, then they know about the curriculum because they are the ones developing it.”

Teacher involvement in curriculum development and revision further facilitates alignment across grade levels. The vertical curricular alignment process helps school systems meet their goals of college and career readiness. A leader in the Garden Grove Unified School District (CA) summed up the importance of such curricular alignment, noting,

We need to hold ourselves accountable at each grade level, to make sure that we help the students meet the state standards and become proficient because a high school teacher cannot place a far-below-basic student in math in algebra or geometry and expect the student to be successful.

Several school systems devote special attention to ensuring that the math curriculum aligns strongly across grade levels. A district administrator in the Flint Community Schools Public Schools (MI) explained that they develop math curriculum units with strong alignment across elementary, middle, and high schools. “We need to build these skills in early years, before high school,” she noted. An administrator from the North East Independent School District (TX) similarly noted, “Those early grades play an important part in students fully understanding math concepts. If it doesn’t begin in K, 1, and 2, there are huge gaps in students’ learning and understanding.”

In all of the consistently higher performing schools visited, educators at the school and classroom levels further strengthen curricular alignment by ensuring that teachers know the specific role that their grade and subject content play in students’ cumulative educational experience. For instance, at Fairview Middle School (Leon County Schools, FL), teachers meet across grade levels and identify specific math skills to focus on at each grade level. In addition, within-school curricular alignment addresses campus-specific needs. In the Spring Branch Independent School District (TX), for example, a leader commented, “I don’t believe that there’s a one-size-fits-all curriculum. Different campuses have different needs. We want them to map those objectives out based on the needs of their students.”

Even when addressing campus-specific needs, educators demonstrate a strong commitment to fully implementing the district curriculum. An administrator at William H. Turner Technical Arts High School (Miami-Dade County, FL) observed,

Looking at the district curriculum, it is clear that Miami-Dade is looking closely at the research about moving students to higher levels of achievement, and closing achievement gaps. This is our priority at Turner Tech as well, so the school and the district curricula align well with each other.

## Theme 2

### Staff Selection, Leadership, and Capacity Building

*District and school leaders in higher performing school systems focus on recruiting, developing, and retaining staff members who can deliver high-quality instruction and help students meet ambitious academic goals. Staff recruitment and selection focus on meeting carefully defined needs within the system. The school system provides multiple opportunities for staff members to enhance their capacity as educators. Capacity-building measures in the school systems include leadership opportunities, staff development activities, and collegial collaboration.*

#### Staff Recruitment and Selection

In addition to pursuing traditional methods of staff recruitment such as online advertisements and fairs, many school districts use creative solutions to fill positions in high-need subjects. For instance, by establishing partnerships,

many school systems enhance their recruitment efforts. To staff hard-to-fill positions in math, science, bilingual education, and special education, administrators in the Miami-Dade County Public Schools (FL) recruit candidates through partnerships with alternative certification organizations such as Teach for America and the New Teacher Project. Managing a school system located in a city with a large military population, leaders in the North East Independent School District (TX) tap into the pool of former military personnel with strong math and science skills and knowledge. To further meet their staffing needs, several school district offices offer financial incentives. In Leon County Schools (FL), the district office partners with the two major local universities and provides tuition assistance for special education staff to earn associate's, bachelor's, and master's degrees. However, an official partnership is not the prerequisite for finding quality staff. For instance, in the Garden Grove Unified School District (CA), educators work with a large number of interns, particularly for critical shortage areas such as special education and secondary math positions.

While district administrators focus on recruiting candidates, school leaders in many school systems receive autonomy in staff selection decisions. This gives school administrators the ability to select the candidates who fit the school's specific needs. Explained a school leader at Los Amigos High School (Garden Grove USD, CA), "We are very forward and open in our interview. We talk about our student demographics because the bottom line is the candidate

#### **Key Findings: Staff Recruitment and Selection**

In addition to pursuing traditional methods of staff recruitment such as online advertisements and fairs, many school districts use creative solutions to fill positions in high-need subjects.

needs to want to work with the student population here." Specifically, Los Amigos' student population includes a large percentage of English language learners from a low socio-economic background, and, as a result, the school administration perceives the need to make sure the chosen candidate is an effective instructor who can work comfortably with the student population. Similarly, a school leader from Perry Middle School (Carrollton-Farmers Branch ISD, TX) described finding a good fit in teachers who "look at the demographics and want to work here at a highly diverse school with challenges like ours." Many of the school systems studied serve a large population of students from racial and ethnic minority groups, and their leaders see the value of recruiting a diverse teaching staff. A district leader in the Garden Grove USD (CA) explained,

We really try to bring in more diversity in our teaching staff and in our principals, because we want our students to see themselves in the face of the school staff and say "I can be successful like them."

In addition to considering student demographics, school leaders base their hiring decisions on factors such as content area expertise and willingness to work with colleagues. An administrator at Excel High School (Boston Public Schools, MA) reported, "I focus on attracting teachers with really strong subject-area knowledge." A few schools allow time for candidates to conduct demonstration lessons, so interviewers may assess potential educators'

### **Key Findings: Staff Recruitment and Selection**

In addition to considering student demographics, school leaders base their hiring decisions on factors such as content area expertise and willingness to work with colleagues.

content expertise and instructional strategies. In addition, on campuses with cohesive and learning-focused relationships among the staff, a willingness to collaborate with fellow teachers serves as an important selection criterion. A leader from International Elementary School (Long Beach USD, CA) shared, “It would be traumatic to bring on board someone who prefers isolation and is not comfortable with teamwork.”

### **Staff Support and Professional Development**

After recruiting and hiring high-quality teachers, administrators provide them with continuous support and opportunities for growth. For newly hired teachers, the majority of school systems have in place an induction program, usually referred to as an “academy” or “institute,” to introduce beginning teachers to curriculum materials and recommended instructional practices. Most teacher induction programs also include one-on-one mentoring programs for teachers new to the profession. The provision of an experienced mentor to each new teacher is critical, reported a district leader in the Long Beach Unified School District (CA), because “we don’t want students to suffer just because they happen to have a new teacher in their classroom.” Frequently, school-level administrators match the new teacher with a mentor teacher who teaches in the same grade level or subject area.

In addition to support specific to beginning teachers, administrators at both the district and school levels actively provide opportunities for all staff members to continuously develop professionally. One administrator from Carrollton-Farmers Branch ISD (TX) explained,

You need to not only attract and recruit the best people. You need to develop them. Good applicants are going to want to grow and become better. It is important that opportunities to grow are provided.

In higher performing school systems, professional development focuses on enhancing curricular and instructional rigor and competencies. School and district leaders believe that continuous professional development allows teachers to deliver the rigorous instruction that leads to high student achievement. For example, a leader in the Garden Grove Unified School District (CA) explained that professional development helps the district meet its goal of increasing the number of students who take advanced courses. Professional development, she explained, “helps teachers develop strategies for working with students who traditionally would not have been in their classes. The students can do it, but need some extra help.” A leader from the Spring Branch Independent School District (TX) noted,

The teacher is the main resource. You can give [a teacher] lots of resources, which we do, but if you don’t develop the teacher and give the teacher the tools to really address the needs of the kids at the point where the child needs it, then the materials and resources are not going to be very helpful.

Professional development also concentrates on specific areas of need. In the McAllen Independent School District (TX), campus leaders analyze performance data to identify areas for targeted professional development. School leaders on several campuses reported surveying teachers about their training needs and interests. After identifying specific professional development areas, many administrators establish partnerships with education institutions to provide classes and training sessions beyond what the school system has the capacity to provide in-house. For example, in the South Haven Public Schools (MI), teachers attend workshops on special education at their county's intermediate school district. Leaders in the Malden Public Schools (MA) establish partnerships with local institutions such as Tufts University.

### **Key Findings: Staff Support and Professional Development**

In higher performing school systems, professional development focuses on enhancing curricular and instructional rigor and competencies. School and district leaders believe that continuous professional development allows teachers to deliver the rigorous instruction that leads to high student achievement.

Continuous professional development is also available to school administrators. For instance, school leaders in the Spring Branch ISD (TX) receive training for curriculum-based instructional monitoring. This training helps administrators understand how to conduct effective classroom walkthroughs. A district administrator noted,

You can't expect the principal, especially at the middle and high school level to go into a calculus classroom and to really know exactly what the content is... So we really make sure we train our principals so they know what they are looking for.

### **Leadership Opportunities**

To help retain highly skilled, effective teachers and administrators, consistently higher performing systems offer leadership development opportunities. Among the school systems studied, many focus on "growing their own" principals. In the Long Beach Unified School District (CA), administrators reported that they actively invest in building a leadership pipeline because "our district has been so rich in talent." Similarly, district leaders in Carrollton-Farmers Branch Independent School District (TX) created a leadership training program. The program targets current assistant principals and asks current principals to serve as mentors. A district administrator shared,

Finding those quality educators interested in administration, helping them, giving them opportunities to take administrative positions is key... The internal training and exposure to principalship help a lot. Many of the principals in the district started out as teachers.

In higher performing school systems, school administrators are not the only ones to receive instructional leadership opportunities. Teachers not only receive support, but often provide it as well. In the majority of the school systems studied, administrators provide job-embedded coaching to teachers at individual campuses. This on-site support creates leadership development opportunities for the classroom teachers who provide coaching. A district leader from the Long Beach Unified School District (CA) observed, "We want to

develop multiple leaders and need powerful leaders at the school sites who are teacher leaders...building your capacity at the school site and helping teachers to grow professional and personally.” Likewise, a leader from the Boston Public Schools (MA) expressed that teacher leadership development “keeps excellent teachers in the field, if not in a classroom of their own, to lend their expertise to other teachers.”

### Staff Collaboration

In addition to the resources and assistance provided by district and school leaders, teachers collaborate constantly to provide and receive support. One leader from the Holyoke Public Schools (MA) commented that everyone in the district sees the benefit of breaking “the practice of self-contained classes” and having professional learning communities that “focus on learning, assessment, and improving student performance. This accounts for a lot of the success in the Holyoke Public Schools.” As a way of achieving focused and rigorous student work, a teacher at Shelby Middle School (Shelby Public Schools, MI) noted, “What makes Shelby Middle School good and unique is really the collegial teamwork. We allow time for colleagues to communicate, to work with and learn from each other.”

Many school administrators embed collaboration time in the master schedule to ensure that teachers have opportunities to meet and work together. However, recognizing the benefits of collegial collaboration, teachers also collaborate informally outside of specified collaboration time. As a school leader at Hill Classical Middle School (Long Beach USD, CA) explained, “The teachers here talk together and do things together a lot. Teacher collaboration is part of the reason we are as successful as we are. If they didn’t do it, I don’t think we would have our success.” During collaboration, teachers on consistently higher performing campuses typically discuss topics ranging from lesson planning to student-performance monitoring. These discussions help teachers align curriculum and instructional practices across subjects and grade levels.

In higher performing school systems, teachers characterize their collegial collaboration as open and non-judgmental. As a math teacher at the Linden School (Malden Public Schools, MA) observed, “We always feel that we can ask each other for help or feedback about a particular instructional issue, or share examples of instructional practices that did or did not work well.” Likewise, teachers at Coolidge Elementary School (Flint Community Schools, MI) explained,

#### Key Findings: Staff Collaboration

Many school administrators embed collaboration time in the master schedule to ensure that teachers have opportunities to meet and work together. However, recognizing the benefits of collegial collaboration, teachers also collaborate informally outside of specified collaboration time.

We cling together pretty tightly as professionals. If a teacher is weak in a particular area, other teachers will step in and work with them so that they master those essential skills. It is all about the strength of the team.

By supporting each other and sharing ideas openly and honestly, teachers can grow professionally. Ultimately, the students receive the benefits of

collegial collaboration. A school leader at William H. Turner Technical Arts High School (Miami-Dade County Public Schools, FL) described how teachers ask one another,

“What can I do to be better at what I do?” It’s not about criticizing each other, but about every single staff member striving to see how they can improve, and how administrators can better support the work of teachers so that together we can increase student achievement.

In higher performing school systems, achievement-focused collegial collaboration often results in an “open-door policy” that allows teachers to feel it is normal to visit each others’ classrooms and discuss what instructional tactics work and do not work. A leader at Shelby Middle School (Shelby Public Schools, MI) explained, “We try to break down the boxes and work professionally and collegially, towards the same goal of improved student learning.” At Lawndale High School (Centinela Valley Union High School District, CA), a teacher noted,

We don’t have a teacher on this campus who will not allow anybody to come in and ask questions, do observations. We share all of our activities, lesson plans, ideas...We’re very close-knit. There’s not one teacher here who’s out of the loop on anything.

#### **Key Findings: Staff Collaboration**

By supporting each other and sharing ideas openly and honestly, teachers can grow professionally. Ultimately, the students receive the benefits of collegial collaboration.

In addition to keeping an open door to their classrooms, teachers in several schools also break the boundary of subject areas to provide cross-curricular support. At the Graham and Parks School (Cambridge Public Schools, MA), teams of teachers teach the same students and pay close attention to what their fellow team members are teaching. A math teacher explained,

For example, the 7th- and 8th-grade teachers will read the book that’s being taught in language arts, and then they’ll try to work discussions of the book into science, social studies, and math classes. Or the language arts teacher will teach students about the vocabulary used in a social studies text.

At King Middle School (Santa Rosa County Schools, FL), cross-curricular support includes reading teachers’ emphasis on nonfiction reading to help students understand scientific texts, and math teachers’ review of the scientific application of mathematical concepts. A teacher noted, “As science teachers are frantically trying to get the students to understand the content, the math department takes over the [science] review in math classes.”

Collaboration also helps educators break down boundaries across schools within feeder patterns. As a school leader at Rowe High School (McAllen ISD, TX) explained, feeder-pattern collaboration is especially useful for helping teachers get beyond “the blame game.” She noted, “Educators from Rowe High School meet with the middle school teachers to articulate our concerns so that the feeder schools have a better understanding of what students have to



achieve before leaving high school.” Similarly, at Los Amigos High School (Garden Grove USD, CA), teachers meet with their subject area counterparts at the feeder middle schools to work on curricular and instructional alignment. A school leader noted that these meetings alleviate “the mentality that if the intermediate schools were doing what they are supposed to, then there wouldn’t be problems at high school.”

## Theme 3

### Instructional Tools: Programs and Strategies

*In higher performing school systems, instructional programs and practices communicate a commitment to rigor for all students. Districts develop processes to carefully research, review, and pilot the effectiveness of new instructional programs prior to implementation. Feedback from teachers and school leaders plays a central role in these district processes. Teachers employ evidence-based practices and differentiate instruction to ensure that all students reach high standards.*

#### Instructional Programs

When selecting new instructional programs, higher performing school systems research the program’s alignment with state standards and district curricular goals, and review current research regarding program effectiveness. As a district administrator in the Lowell Public Schools (MA) noted, “Everyone really has a strong vision of where they want to go in all of the core subject areas, so that makes it pretty easy to choose programs. We will only select the instructional programs that match our vision and align with our academic goals.” District administrators also study the key research in the field to identify instructional programs with a proven record of success. Administrators in Shelby Public Schools (MI), for example, noted that the research criteria used in the selection of math instructional programs include examining whether the program received endorsements or recommendations from the Trends in International Mathematics and Science Study (TIMSS) or the National Council of Teachers of Mathematics. After reviewing research and curricular alignment, district administrators collect sample program materials, and ask teachers and district staff to meet, discuss the materials, and offer candid feedback. In the Lowell Public Schools (MA), district curriculum specialists identify three “finalist” programs and then give sample program materials from all three to teacher teams throughout the district. “The goal is to build some sort of consensus as much as possible before we make a final choice,” explained a Lowell district administrator.

District leaders often decide to pilot test a new program at a few schools before they purchase it for the entire district. A school administrator at Perry Middle School (Carrollton-Farmers Branch ISD, TX) explained,

If district administrators identify an instructional program that they’ve seen work in other schools, they will first pilot the program at a campus in the district. If success is seen at the school where the program is piloted, then it is slowly implemented throughout the district...The district

### Key Findings: Instructional Programs

District leaders provide teachers and school leaders with all the training and support necessary for successful program implementation. When implementing new instructional programs district-wide, district administrators invest in professional development in order to ensure that teachers are well-prepared to use the new program in their classrooms.

wants to make sure that the program is aligned with the curriculum, and that the data is there to support success.

District leaders provide teachers and school leaders with all the training and support necessary for successful program implementation. When implementing new instructional programs district-wide, district administrators invest in professional development in order to ensure that teachers are well-prepared to use the new program in their classrooms. An administrator in the Malden Public Schools (MA) observed,

If you have a new instructional program, you have to give teachers as much support as possible.

That way, when we evaluate the effectiveness of the program at the end of the year, it will be with the knowledge that the program is being fully implemented. The program can be evaluated on its merits, not on the level of implementation.

District administrators sometimes organize workshops for teachers directly, and sometimes they employ a “train the trainer” model in which they prepare instructional coaches or other instructional specialists to deliver professional development in each school. For instance, when the Lowell Public Schools (MA) implemented a new math program in 2003, district administrators developed specific professional development offerings for each unit of the new program. Teachers studied each unit with their grade-level peers before teaching the unit. Instructional coaches facilitated lesson-study and lesson-planning sessions.

### Instructional Practices

Across the school systems studied, district and school leaders said high-quality instruction consists of high student engagement in classroom activities that demand higher order thinking. As a district administrator in the North East ISD (TX) explained, “We encourage the students to do the thinking rather than have them regurgitate what the teacher says. It requires the students to draw on their own knowledge and then expand upon that knowledge.” Math and science teachers similarly reported that they push students to apply the knowledge that they have learned, rather than simply repeat it. For example, several science teachers at the High School for Health Professions (South Texas ISD, TX) explained that they have been moving their laboratory assignments away from “cookbook labs,” where students simply repeat a set of lab procedures given to them by the teacher. Instead, teachers assign more exploratory labs, which require students to answer a particular research question by designing their own experiments, carrying out the experiments, and then analyzing the resulting data. A district leader from the Malden Public Schools (MA) noted that he encourages teachers to move away from direct instruction and towards a coaching and assessment role in the classroom:

Everyone is talking a lot more now about higher stakes for students. As a result, I talk to teachers about placing more responsibility on students to do their work. Students need to come into the classroom and feel like they're in a high-stakes environment, and this needs to happen every day. Students need to know that when they break up into pairs or groups to work on an activity, they're going to have to report out at the end of class, and they will be expected to produce something.

In order to build high student engagement in every classroom, consistently higher performing school systems employ a variety of techniques to create student-centered classrooms. District leaders encourage or mandate these instructional practices and school administrators and classroom teachers implement them. In the Boston Public Schools (MA), district administrators recommend that all teachers, across subject areas, adopt the “workshop model” of instruction. Explained a Boston district administrator, “The workshop

### **Key Findings: Instructional Practices**

In order to build high student engagement in every classroom, consistently higher-performing school systems employ a variety of techniques to create student-centered classrooms. District leaders encourage or mandate these instructional practices and school administrators and classroom teachers implement them.

model is intended to provide a balance between teacher voices and giving students the ability to communicate and create.” Three sections comprise each class period: a mini-lesson delivered by the teacher on the objective of the day; a conferencing phase where students work on an assignment related to the objective and teachers work with students one-on-one or in small groups; and a reflection phase, where the class discusses what they learned that day. Math and science teachers at Snowden International High School (Boston Public Schools, MA) reported that the workshop model allows them to focus on developing the student’s ability to problem-solve, reason, and communicate. A science teacher observed,

I really try to transfer responsibility for learning to students. I don’t like to answer a lot of questions in class, because I really prefer that students try to provide the answers. I go over assignments with them, but when students ask for the answer, I try to have them figure out the answer as a class. When we do a lab, I let the students determine the most effective way to communicate the lab results: through a chart, a graph, a computer simulation, or a write up.

Similarly, in the Miami-Dade County Public Schools (FL), district curriculum coordinators for math and science encourage teachers to employ an inquiry-based model of instruction. A district administrator explained, “It is important to guide the student towards the ‘meaningful moment,’ not just tell them what they need to know.” The district’s math and science teachers use a combination of instructional strategies, including cooperative learning, direct instruction, labs, manipulatives, and other hands-on multimedia activities to ensure that students are actively engaged in the day’s lesson. Math and science teachers at William H. Turner Technical Arts High School (Miami-Dade County, FL) reported frequent use of technology to conduct simulations and give students what one teacher called “the feel of real life.” One science teacher commented,

In the past, before the state assessment, 9th-grade science students could learn something today, forget it tomorrow and no one would care. But now, they must retain what they learn until the eleventh grade when they take the state exit exam. The teachers really use innovative techniques to get this knowledge engrained in the students' minds: lots of multimedia, lots of technology, and frequent labs.

Teachers at higher performing schools use student-centered instructional practices to emphasize the real-world applications of their lessons. Teachers explained that they tap students' prior knowledge and then draw connections between that knowledge and the math and science concepts being taught that day. A science teacher at Snowden International High School (Boston Public Schools, MA) explained,

In biology, for example, the idea is that students need to see how scientific concepts can be observed in the real world. I have my students work on some kind of project every single day that relates biology to real-world phenomena. I want to move students away from memorization. All the learning theory suggests that knowledge is constructed. For students to learn, the concepts have to be related to their environment. Luckily, the Boston Public Schools have really embraced this idea, and we use a very activities-based curriculum with lots of labs and other hands-on experiences.

All the teachers agreed that they work to create a classroom environment where students feel safe trying to answer questions, make presentations, and do experiments, even if they make a mistake. "Mistakes are O.K., because you learn from mistakes!" said another Snowden science teacher.

Many consistently higher performing school systems have adopted district- or school-wide initiatives integrating literacy activities into all courses, including math and science. In many cases, the focus on literacy arises from a belief on the part of school and district leaders that reading and writing are no longer a part of students' everyday lives, and thus the subjects require extra time and attention within the school day. Noted a district leader in the Flint Community Schools (MI), "As in most urban districts, students come to us with very few literacy experiences, such as reading and being read to. However, by the time students leave our school system, we have made up lots of ground!"

A school administrator at William H. Turner Technical Arts High School (Miami-Dade County, FL) agreed, noting, "Students need to read more, and need more exposure to academic vocabulary. The school needs to speak loudly to them about the importance of reading. All teachers need to be reading teachers." To increase student's reading and writing skills, the school adopted a program known as "15 + 5." Across the curriculum, every day, each class period includes at least 15 minutes of literacy-based activities, followed by a brief, 5-minute assessment. School leaders also encourage teachers to give students constructive feedback and criticism on their writing assignments. "I don't just want to have teachers give students 'checks' or 'check plusses' or rubric scores," explained a school administrator. The school's full-time reading coach works with all teachers in the school delivering professional

development on vocabulary building. Math teachers reported that they use the literacy time to teach students how to decipher word problems. “Students often get really scared of math problems,” a teacher explained, “and this has helped the problems seem less intimidating.” In addition to the “15+5” requirements, each morning between 7:35 and 8:05 a.m., the students, administration, faculty, and staff at Turner all stop to read for 30 minutes. Teachers encourage students to select challenging materials such as novels for their sustained silent reading time.

District and school leaders believe that a strong focus on literacy helps raise student achievement in every subject by allowing students to more accurately demonstrate their knowledge of core course content. At Excel High School (Boston Public Schools, MA), school leaders encourage teachers to link the language of math to basic math skills by teaching students how to understand and express mathematical ideas through writing. For example, teachers ask students to read and analyze story problems, or ask them to explain in writing how they solved a math problem. Explained a math teacher,

We’re not just doing this because of the state tests. However, the literacy focus helps raise achievement on the test, because the state test is still at its core a literacy test, even in math. Students need to work on their literacy skills in order to do well on the test.

Similarly, math and science teachers at Spring Oaks Middle School (Spring Branch ISD, TX) explained that they include a focus on reading strategies and vocabulary in their lessons, especially since most of the problems on the state math tests are word problems. “If they don’t understand the words, like ‘algebraic function’ or ‘triangular prism,’ they’ll completely miss the problem,” asserted a math teacher.

### **Student Placement**

District and school educators encourage all students to pursue AP, honors, and other advanced coursework, and they provide the support necessary for students to succeed in advanced classes. Rather than placing students on “advanced,” “grade level,” or “remedial” tracks, school systems maintain flexible enrollment policies. At many of the schools studied, teacher recommendations, based on their perceptions of a student’s work ethic, attendance record, and overall motivation, determine students’ eligibility for advanced coursework. Believing that students are often capable of higher achievement than the students themselves realize, teachers in consistently higher performing school systems push students to consider more advanced coursework. In the Garden Grove Unified School District (CA), for example, equal access to challenging courses for all students is the basis for district and school placement policies. A district leader commented,

Any students who demonstrate that they are able, even though it may take some extra help and support to meet the standards of the rigorous class, are put in that rigorous class. The district model is to push students higher whenever possible...So if they have any chance of going into a higher class, that’s where we want to put them.

Administrators at Bonham Middle School (Temple ISD, TX) maintain a similar focus on giving every student appropriate challenges. One school leader described advanced courses as “open to every child we can possibly get there. If a child has high test scores but is not in challenging classes, I ask why.” Student schedules are flexible at Bonham, with administrators constantly reassessing student placement and making modifications to ensure they appropriately challenge and accommodate every student. Any changes in student course enrollment are based on student performance on benchmark assessments and teacher recommendations. A school leader at Bonham explained, “Flexibility is the key. We are not at all reluctant to move students if they are in the wrong place. The child comes first.”

Leaders of consistently higher performing school systems understand that advanced coursework paves the way for college readiness and success. As a result, school and district policies increase the availability of advanced courses, and educators help ensure that students have the support they need to tackle rigorous coursework. In the Boston Public Schools (MA), for example, administrators in the district’s science department have been especially successful at developing strategies for bringing AP classes to urban students. Explained a district administrator,

The Science Department in Boston is really a leader in the field. In the past, the other content areas were focused on raising state test scores, but the science director knew that AP for urban students had more impact than for suburban students, because it provides external validation for their work.

Boston’s Science Department works to prepare students for the rigor of AP coursework before they even enroll in AP classes. Teachers participate in vertical-team training to increase rigor across grade levels, and many AP teachers commit to teaching summer bridge classes, which students take the summer before enrolling in advanced coursework. These classes are designed to ensure that students have the necessary skills and knowledge to succeed in the AP program. As a result, district administrators noted that scores on AP science courses have improved dramatically in recent years.

### **Key Findings: Student Placement**

Leaders of consistently higher performing school systems understand that advanced coursework paves the way for college readiness and success. As a result, school and district policies increase the availability of advanced courses, and educators help ensure that students have the support they need to tackle rigorous coursework.

Differentiated instruction provides adequate scaffolding so that all students can access higher levels of instruction. While higher performing school systems teach the same rigorous curriculum to all, teachers build differentiation into their lessons so that the curriculum meets the needs of each individual student. A district leader in Shelby Public Schools (MI) observed, “We tell teachers that it’s not about what you teach, but what the students learn. If students haven’t learned it, you have to find a different way to reteach so that students get what they need.” A math teacher at the Pyne Arts School (Lowell Public Schools, MA) noted that he looks for the learning style that fits best with each particular student:

Students with higher cognitive levels might like thinking abstractly. Struggling students need more concrete representations of math concepts, so we'll also do more hands-on activities, such as working with manipulatives. Part of being a good teacher is being able to adapt your instruction to different learning styles. The district selects instructional programs that allow teachers to use multiple representations of math concepts. Different students can use different ways to solve problems. They just have to be able to explain their reasoning no matter what approach they use.

At Hill Classical Middle School (Long Beach USD, CA), lesson differentiation and tiered assignments strengthen student engagement. A school leader noted that these instructional strategies allow “students to have some choice in, not necessarily what, but how they are going to learn, how much effort they are putting into, and how deep they are going.” While keeping all lessons aligned with the curriculum and the state standards, teachers tailor instruction to different student needs and learning styles. For example, a science teacher explained,

I give my class a menu of assignments, and the students will get to pick a project from the menu. The students like it because it's not me telling them what to do. Grading is based on criteria for things the students have to do to get A's, or B's. So the students know what grade they want to shoot for and what they will have to do. Students at Hill really like choice.

Teachers and school administrators are skilled in the use of instructional strategies and arrangements that meet the needs of most English Language Learner (ELL) students and special education students within regular classroom settings. Most of the higher performing school systems studied make a concerted effort to maximize the time English Language Learners and special education-eligible students spend in mainstream academic classes. In the Spring Branch ISD (TX), for example, school and district administrators mainstream most special education students and English Language Learners, ensuring that these students have access to the same curriculum as all other students. The district office encourages teachers and school administrators to understand the individual needs of their students. A district administrator explained, “The first thing you need to do is know your learner. It's not enough to just know that the child is an English Language Learner” or is eligible for special education services. When students do need additional assistance, they remain in their core content classes. Some classes have a co-teacher in the classroom every other day. However that co-teacher is not exclusive to the special education students, and those students are not isolated nor identified in any way that is different from the other children. As one teacher at Spring Oaks Middle School (Spring Branch ISD, TX) observed, “The co-teacher helps everybody. They all need help.”

To better serve all students in their classes, teachers employ a variety of different student grouping and instructional practices. Math and science teachers at William H. Turner Technical Arts High School (Miami-Dade County, FL) encourage cooperative learning to meet the needs of English Language

Learners. Teachers often ask students to work in small groups, with native and non-native speakers in each group. A science teacher explained that he permits students with limited English proficiency to sit next to students who are bilingual, and he lets them converse in their native language during class, and even during tests. “In the past, I never would have let students talk to each other during a test,” he said, “but I’ve discovered that it really helps English Language Learners understand the questions and understand what they need to accomplish.”

## Theme 4

### **Monitoring: Compilation, Analysis, and Use of Data**

*Districts conduct regular, data-driven monitoring of each school’s progress towards meeting academic goals. To enable this monitoring process, district and school leaders provide teachers with formative assessments aligned with the district curriculum and state standards. Teachers supplement formal assessments with daily, informal in-class monitoring of student progress. District leaders ensure that principals and teachers have the necessary skills to access and analyze assessment data. Informed by careful data analysis, teachers, school administrators, and counselors meet regularly to discuss student progress, and work to involve students and parents in ongoing progress monitoring. School leaders use frequent classroom observations to further monitor instructional practice and curriculum delivery.*

#### **Performance Monitoring**

In consistently higher performing school systems, district leaders, school leaders, and classroom teachers monitor their established goals and initiatives, remain honest about progress made, and work towards continuous improvement. A district leader in the Garden Grove Unified School District (CA) explained the district philosophy:

Be very thoughtful and specific about what your goal is. Then break that down into pieces that are measurable, that you can truly hold yourself accountable to. It has to be something that you can know if you’ve achieved it, and you can say each year, “are we on course?”

All school leaders in Garden Grove adopt similar strategies: first, they establish goals and then they specify the evidence they must gather to measure progress towards those goals. School leaders carefully analyze district-provided data for their school. A district leader commented, “Typically, the principals are the first ones to notice what worked and what they need to keep working on, when they get their data.”

In addition to informing evaluations of overall district, school, and classroom performance, data drive decisions about expanding or continuing particular academic or instructional programs. School and district leaders in the Long Beach Unified School District (CA) base decisions regarding academic programs and initiatives upon wide-ranging, disaggregated, and longitudinal



student data. Before new programs and initiatives are adopted district-wide, district administrators review preliminary data from pilot studies conducted by the Research Office, including pre- and post-tests. One leader commented, “We are very strategic in the way we do things, so we don’t jump in with both feet.” District administrators rely on longitudinal data to determine program effectiveness. Data reviewed by district administrators includes input from teachers. The district office provides numerous opportunities for teacher input, including regular forums the superintendent holds for all employees to share opinions about district programs and initiatives. Teacher input also serves as an important data point in district-conducted research studies. Based on the review of data, educators make modifications, discontinue a program, or try to replicate success. All stakeholders regard program discontinuation as a learning experience. One Long Beach district administrator explained, “As educators, we have to come to the realization that it’s O.K. to say that we started something that was wrong...it’s about continuous improvement and becoming a learning organization.”

District training often provides the extra push educators need to start making data-driven decisions. In the North East ISD (TX), the district has organized a “data coaching” initiative to involve all school leaders in the careful and

### **Key Findings: Performance Monitoring**

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purposeful analysis of student data. At the beginning of the year, school leaders must review their data, create a presentation that analyzes the data, discuss how they plan to implement their school improvement plan and share the presentation with their faculty at the beginning of the school year. Later in the fall, the district asks school administrators and teachers to analyze the data for each of their special education and ELL students. They then discuss the results and determine future plans and strategies for those students. During the spring, the district asks school administrators and teachers to reflect on their practices during the school year, determine what is working, and then report the results to district leaders. As one district administrator explained, “What we’ve tried to stress to people is that data does not answer questions. It simply reveals more questions to ask.”

### **Assessment**

Common assessments and district benchmarks monitor student mastery of the district curriculum and help teachers align instruction across school levels. In nearly all consistently higher performing school systems studied, educators administer district-wide benchmark assessments four times a year in core content areas (one baseline pretest, followed by three tests during the year). District assessments align with the state standards and the district pacing guides. In the Garden Grove Unified School District (CA), for example, district administrators review district-wide quarterly benchmark assessments for all core subjects. Educators create and revise benchmark assessments based on pacing and state focus standards. At the secondary level, benchmarks are

available for the core subject areas. Student performance on the benchmark assessments correlates highly with performance on the state tests. A leader at Los Amigos High School in Garden Grove commented, “Because we have the benchmarks, and because the district keeps track of those benchmark exams, there is an accountability to stay on track.”

Beyond district benchmarks, common mid-term and end-of-course exams, developed at either the school or the district level, help to ensure that students are learning the district curriculum at the required level of rigor. For example, math teachers at William H. Turner Technical Arts High School (Miami-Dade County, FL) reported that they use the same mid-terms and finals, and assign the same major projects. As a result, all teachers in the department understand how their students are doing relative to one another. Common math assessments used in both middle and high school classes help middle school teachers prepare their students for high school coursework. For example, the Lowell Public Schools (MA) uses common Algebra I assessments, shared between middle and high schools. “One of the big problems in math in most districts is the disconnect between what middle schools expect and what high schools expect,” reported a district administrator. “The immediate feedback to 8th-grade Algebra teachers from common assessments is really powerful, and it really raised the expectations that middle school math teachers had of their students.”

In addition to benchmark tests and other formal formative assessments, school leaders encourage teachers to measure student progress on a daily or near-daily basis through brief informal assessments. “Too many teachers think that assessing students means giving them a formal test,” explained a school leader at William H. Turner Technical Arts High School (Miami-Dade County, FL). “I’m pushing teachers to see that assessment can take many forms, and does not need to be lengthy. An assessment can involve asking one student to teach another student the concept they just learned, or write a quick paragraph.” These daily informal assessments help teachers measure whether students understand the material, and help teachers identify areas that may require re-teaching. At the beginning of each class, math and science teachers at the Linden School (Malden Public Schools, MA) ask students to complete a “Do Now” warm-up problem covering material taught the previous day. Teachers review the warm-ups and check to see if students understand the key concepts. Math and science teachers give frequent quizzes and closely monitor homework responses. In addition to regular informal paper-and-pencil assessments, the teachers reported that they question students constantly during class to see if they understand the concepts being taught. A math teacher explained,

We all do a lot of “clipboard assessments” where we walk around during class and check to see how students are doing with their work. We also do “thumbs up, thumbs down” assessments, where teachers ask the class if they feel like they understand a problem, and students will either give “thumbs up” or “thumbs down.”

## Monitoring Students

Teachers and administrators use data to monitor student progress, identify learning gaps, and move all students towards mastery. The monitoring process is highly collaborative, promoting a sense that everyone needs to work together to move students towards college and career readiness. In higher performing school systems, all stakeholders can easily access detailed student performance data. Teachers and school administrators receive training in data analysis, allowing them to identify either individual struggling students, or students in particular classrooms or subgroups who may be falling behind. In the Long Beach Unified School District (CA), the district's online data system provides teachers and school administrators with the results of benchmarks and common assessments. District administrators make sure that the turnaround time between the test date and the delivery of results to teachers is very short. District data reports include detailed and disaggregated information, such as item analysis of each question for each class, "so teachers will know what specific content knowledge or items were missed by many students and use the data for instructional purposes." Also available to teachers is information concerning each individual student's academic strengths and weaknesses. In addition, access to student-level longitudinal data enables teachers to determine whether a weak area is a recent development or a long-standing problem.

Educational leaders expect all teachers to know how their students performed, what they as teachers did to impact that performance, and what they plan to do in the future to raise student achievement. Teachers at Adams Middle School (Wayne-Westland Community Schools, MI), for example, create "Data Walls" to showcase their annual progress towards school-wide improvement goals. Data Walls display at least 3 years' worth of student data, shown in graphs with a minimal amount of written explanation. Teachers develop a goal statement and include it on the Data Wall, along with the school's criteria for success and the strategies used to accomplish the goal. The Data Wall also exhibits data showing the impact that strategies and actions had on student achievement, as well as the next steps for improvement in the coming school year. This activity requires educators to perform a more in-depth analysis of their data and their efforts to improve student achievement.

Understanding that data analysis and instructional improvement is often a collaborative process, teachers frequently meet in grade and subject-level teams to review their state data and decide which curricular areas need additional focus. "In a sense, we are 'teaching to the test,'" a science teacher at Snowden International High School (Boston Public Schools, MA) noted, "but we really focus on teaching the content and using the test as a benchmark or rubric for making sure that the content is all being delivered."

Teachers, school administrators, and counselors discuss individual student progress during regularly scheduled collaborative meetings. For instance, at Excel High School (Boston Public Schools, MA), teachers meet weekly in

subject-area teams. During these meetings, teachers review the progress of individual students. Explained one teacher, “The 9th-grade Algebra teacher will tell the 10th-grade Geometry teacher what to expect from particular students, so the 10th-grade teacher will feel like he knows all his students before he even meets them.” Teachers emphasized that these discussions are not “gripe sessions” about individual students, but rather the gathering of “scouting information.” Each of the three guidance counselors is assigned to a particular core subject area (math, science, and English), and they each attend their subject area’s department meetings. Close collaboration between teachers and counselors allows Excel’s staff to coordinate academic support services and counseling for students and make sure that students receive these services at the first sign of academic difficulty.

### **Key Findings: Monitoring Students**

The monitoring process is highly collaborative, promoting a sense that everyone needs to work together to move students towards college and career readiness. In higher performing school systems, all stakeholders can easily access detailed student performance data.

In higher performing school systems, careful monitoring of students’ performance occurs even as a student moves between school levels. Teachers and counselors monitor students during transitions between grade and school levels, and teachers analyze data in order to understand the learning needs of incoming students. “The district has good software to help us track student-level data over time and across schools,” a math teacher at William H. Turner Technical Arts High School (Miami-Dade County, FL) reported. “I can look at my students’ assessment results in middle school, and know what to expect when they arrive in my class.” At Snowden

International High School (Boston Public Schools, MA), teachers explained that weekly grade-level team meetings are helpful for assessing the needs of entering ninth graders. Explained a math teacher,

Snowden is a school of choice, so students are assigned here from throughout the district. There is not a traditional feeder pattern. Because students come from all over, it is important that teachers figure out the skill levels of entering ninth graders quickly so that they can tailor instruction to their needs.

At Snowden, 9th-grade teachers meet and discuss every individual student in the first few weeks of the school year to quickly get a sense of any significant learning gaps. The guidance counselor also attends these meetings and is thus able to direct additional help towards students who may be struggling. “Good communication between the counselor and the teachers really helps everyone identify struggling students immediately,” noted a school administrator.

In several of the school systems studied, teachers ensure that their students possess in-depth knowledge about their own academic progress, areas of strength and weakness, and improvement goals. Teachers at Bonham Middle School (Temple ISD, TX) talk to students about the number of questions they need to answer correctly in order to pass tests. After each benchmark test, teachers go over each question and work with each student on the “Goal Sheet,” a 3-year plan organized by state standards that allows the student to see where he is, why he missed a question, and the path he needs to follow for

each subject area. The Goal Sheet serves as a contract, with the student, parent, teacher, and principal all signing it. A school leader at Bonham Middle School noted, "Every child in this building knows where they scored on the last benchmark test. It's teaching kids it's about their life. They're not just taking a test; it is about where they can go with their life someday."

Teacher-generated report cards, grade checks, conferences, and phone calls further enhance parent and student involvement in monitoring. At Shelby Middle School (Shelby Public Schools, MI), school leaders provide parents with easy and frequent access to student data. For example, parents access the online Parent Grade Viewer program to see their children's performance as registered in teachers' grade books.

Because many of the consistently higher performing schools studied serve primarily low-income families, schools and districts communicate with parents about ways that they can expand opportunities for their children. At Fairview Middle School (Leon County Schools, FL), school leaders give parents access to grades and assignments online and on paper. At the end of every 9-week grading period, teachers send home progress reports to keep parents informed. Several teachers also generate weekly reports for failing students. Recognizing that the complexity of the state accountability system often confuses parents, Fairview educators explain state assessment data to parents via "FCAT Chats" which help parents understand the Florida Comprehensive Assessment Test, or FCAT. District administrators further support parental involvement through community forums, school climate surveys, and a district-published "Parent Guide" that explains policies regarding promotion, intervention, assessment, and performance monitoring. A leader at Fairview Middle School noted, "Sometimes we think poor families don't support their children, but they do and they care a lot...They just didn't know what their child could do."

### **Monitoring Instruction**

School leaders in higher performing school systems actively and consistently monitor instructional practices and curriculum delivery. At Bonham Middle School (Temple ISD, TX), school leaders visit classrooms constantly, and teachers and students feel comfortable with administrators' regular presence in their rooms. District and school leaders report that the walkthroughs provide them with a real-time view of what goes on in the classroom. They know whether students are engaged, and whether or not a particular teacher might need to improve his or her method of instruction. A school leader at Bonham explained that her goal is to walk through every classroom every day. Similarly, at Tampa Bay Technical High School (The School District of Hillsborough County, FL), district and school administrators conduct multiple daily walkthroughs in all classrooms. Each administrator tries to conduct a minimum of twenty 3-to-5-minute classroom walkthroughs each week. Administrators make sure the teacher has the day's objective written on the board, and they check to see whether students seem engaged in the lesson. Administrators also monitor whether teachers differentiate instruction within the classroom.

Regular classroom visits are only the first step in the instructional monitoring process. School and district leaders work together to assess the quality of

instruction in each classroom, provide teachers with feedback, and develop school-wide strategies for improving instruction. For example, in the Malden Public Schools (MA), district leaders ask all principals to conduct brief, informal, weekly classroom visits over the course of the school year. The principals use a two-page, district-developed observation rubric to record their observations. During leadership team meetings, principals from across the district discuss their experiences during the visitations, and share ideas about how to give teachers feedback to improve their instruction. Explained a district administrator,

### **Key Findings: Monitoring Instruction**

Regular classroom visits are only the first step in the instructional monitoring process. School and district leaders work together to assess the quality of instruction in each classroom, provide teachers with feedback, and develop school-wide strategies for improving instruction.

We want the observations to be an opportunity for dialogue, and we want the principal to explore ways to help their teachers. For example, if the principal sees that the kids are not being attentive to the teacher, the principal will suggest some new monitoring techniques. Principals want to coach teachers, rather than being overly prescriptive.

A district leader in Malden noted, “My hope is that teachers think it is normal to have visitations and peer observations. My goal is for there to be frequent, honest, open, and respectful conversations about instruction in every school.”

## **Theme 5: Recognition, Intervention, and Adjustment**

*Teachers identify struggling students as early as possible, and direct them towards a variety of proven intervention strategies, developed at both the school and district level, that assist all students in mastering grade-level academic objectives. Schools offer intervention programs and resources during the school day, as well as outside of regular class time. To help motivate students to stay on track for graduation, teachers, school administrators, and guidance counselors encourage students to identify college and career goals that match their personal academic interests. Educators review and adjust instructional programs and practices based on student performance outcomes. District and school leaders provide focused resources and support to quickly identify and assist teachers in need. If an entire school seems to be struggling, district leaders step in to help school leaders develop focused and specific improvement plans.*

### **Student Interventions**

Higher performing school systems intervene with struggling students as early as possible, with the goal of avoiding the need for more intensive, formal intervention or retention later. At Spring Oaks Middle School (Spring Branch ISD, TX), intervention programs and practices focus on student academic needs, and educators develop them using data from the classroom, school, and district levels. Academic counseling for at-risk students occurs every 3 to 6

weeks. Students who are failing or in danger of failing meet with a guidance counselor individually. During these sessions students set goals for themselves, such as passing a course or submitting all of their homework. The guidance counselor noted, “We pull them in, which says to them ‘you’re special, someone is looking out for you.’ Afterwards they seek you out; they keep track and want you to know that they met goals and are passing their classes.”

Similarly, in Shelby Public Schools (MI), educators believe that high school dropout prevention can begin even in middle school. A school leader at Shelby Middle School explained, “What we are doing at the middle school is early interventions. We are trying hard to make students feel we are trying to intervene so that they don’t fail.” The school focuses on strengthening students’ study skills because they believe that study skills help set a foundation for high school success. In addition to integrated study skills in core content courses, all students have access to a study skill elective course, and 8th-grade students must enroll in a summer program focusing on building study skills before beginning high school. Once students enter the ninth grade, high schools continue to focus on study skill development. At Excel High School (Boston Public Schools, MA), for example, all 9th-grade students complete a course on study skills and organization. The class teaches skills such as careful reading, critical thinking, note taking, test preparation, and working effectively in groups. The counselor explained, “There are no honors classes in the ninth grade because we don’t know the students yet. We want to make sure that all entering 9th grade students learn the skills they need to succeed academically.”

### **Key Findings: Student Interventions**

After identifying struggling students, higher performing school systems offer a number of proven, practical intervention programs to get students with learning difficulties back on track towards college and career readiness. These programs generally take three forms: intervention programs built into the regular school day, supplemental tutoring offered outside the regular school schedule, and credit recovery programs.

High schools also focus on identifying struggling 9th-grade students as part of dropout prevention efforts. At Tampa Bay Technical High School (The School District of Hillsborough County, FL), for example, school administrators sit down individually with every incoming freshman with low 8th-grade scores on the state tests to develop an improvement plan. When they get early indicators or signs that students may be at risk of dropping out, higher performing school systems work with those students to get them back on track. Explained a school leader at Snowden International High School (Boston Public Schools, MA),

Dropout prevention all goes back to climate and school size. The school is small, which enables us to form relationships with each student. All students are connected to at least one adult at the

school. We believe that there are two critical periods when students are most at-risk: 9th-grade repeaters, and 12th graders who get discouraged about whether they can finish all the different requirements for graduation. We pay special attention to students in those grades, to look for early warning signs

A school counselor similarly noted,

I feel really passionately about education. I feel like that it's the key to a good life. If I see a kid who is struggling, I immediately start tracking him down and talking to him about staying in school. I tell him how hard it is out there without a high school diploma. I'll go to the student's teachers, and the student support team to try to get the student the help he needs. Dropout prevention, like everything else at Snowden, requires the coordinated effort of teachers, counselors, and administrators, as well as the students themselves.

After identifying struggling students, higher performing school systems offer a number of proven, practical intervention programs to get students with learning difficulties back on track towards college and career readiness. These programs generally take three forms: intervention programs built into the regular school day, supplemental tutoring offered outside the regular school schedule, and credit recovery programs. In the majority of the school systems studied, administrators organize the master schedules to provide intervention time during the regular school day for any student who needs help. At the High School for Health Professions (South Texas ISD, TX), for example, the school builds a 30-minute tutorial period into the daily school schedule. In keeping with the school's health science theme, these tutorials are known as "morning rounds." During morning rounds, students must meet with teachers for tutoring, study independently, or attend meetings related to extracurricular activities.

Other schools offer even more intervention time during the school day. Recognizing the importance of strong basic math skills in preparing students to take college preparatory coursework in high school, educators in the Lowell Public Schools (MA) require all middle school students to take 90 minutes of math instruction daily. Students receive enrichment, targeted interventions, or remedial instruction for 30 minutes a day, in addition to their daily 60-minute math class. At the beginning of the school year, after reviewing the previous year's state test scores, school leaders assign each student to a math intervention class targeted to specific needs. While each school in Lowell is free to develop its own intervention model, teachers at the Pyne Arts School plan instruction from an intervention curriculum program provided by the district. Students also take daily 30-minute English Language Arts intervention courses focused on vocabulary and reading comprehension. Teachers regularly move students between intervention groups based upon the students' current mastery of the material.

In addition to school-day intervention programs, teachers in the higher performing schools studied overwhelmingly reported that they work with students before school, after school, or during weekend "Saturday Schools." A school leader at Excel High School (Boston Public Schools, MA) noted,

All the teachers here work really hard to help students. Nearly all teachers stay after school to tutor students, many without any additional compensation. This is not the kind of school where teachers are out the door as soon as the school day ends at 2:00 PM. I really look for teachers who don't have an attitude that they work only from 7:00 AM to 2:00 PM. It



is important to be good in the classroom, but teachers at Excel need to go the extra mile outside the classroom as well.

The administrative and teaching staff at Spring Oaks Middle School (Spring Branch, TX) uses creative methods to persuade students to attend intervention programs. The school offers incentives for students attending Saturday School. “Always start with pizza,” the guidance counselor advised. The school offers prizes that students can win by attending. A teacher noted, “We will find kids. After school, we tell them, ‘you’re not leaving; we’ve got work to do.’ Persistence, consistency, holding them accountable, no excuses, failure is not an option. They know that. We demand it.”

Many of the schools studied offer credit recovery programs to help students avoid retention and keep them on track for high school graduation. In the South Texas ISD (TX), schools in the district offer catch-up programs known as “contracts.” Every 6 weeks, teachers offer contract opportunities to students with a class average of 65% to 70%. These students are in danger of failing, but their teachers believe that they can pass the class if they put in some extra work. The teacher looks at the student’s work to identify the concepts with which the student struggled in class, and then ask the students to go back and repeat class assignments in these areas. The student and his parents sign a contract identifying the work that the student will complete. After the student turns in the make-up assignments, the teacher evaluates whether or not the student has demonstrated mastery of the concepts. As a school counselor explained, the idea underlying the contract system is that a student who failed to master a few concepts should not have to repeat an entire course and fall further behind. The district also offers after-school “restart” classes during the spring semester for 9th-grade students who failed a math, science, or English class in the first semester. In the restart class, they get to re-learn and make up the work they failed in the first semester.

#### **Key Findings: Student Interventions**

Teachers and administrators work hard to inform students about career and college opportunities, and they work individually with students to develop post-secondary goals. School and district leaders believe that seeing what they can do after finishing high school helps students see the value of their education and remain engaged in their coursework.

Teachers and administrators work hard to inform students about career and college opportunities, and they work individually with students to develop post-secondary goals. School and district leaders believe that seeing what they can do after finishing high school helps students see the value of their education and remain engaged in their coursework. Explained a counselor at Excel High School (Boston Public Schools, MA),

The school culture here really expects every student to go to college. We enroll many first-generation college students, so the counseling team really micromanages each student’s college application process. We begin preparing students for college admission requirements from the first

moment they walk in the door in ninth grade. We explain to students how GPA’s are calculated, so that they can see how the grades they get in ninth grade count when they apply to college.

In addition, teachers and counselors at Excel communicate closely with parents. A counselor noted,

Because many parents are not college graduates, they may be less familiar with college entrance requirements, SATs, financial aid forms, etc. The counselors do a lot of financial aid and admission counseling with parents and students. We also do a lot of “hand-holding” with parents, because many of them believe that college is unattainable because it is too expensive.

At William H. Turner Technical Arts High School (Miami-Dade County, FL), which maintains a dual focus on college preparation and vocational-technical education, teachers and administrators encourage students to research career fields that match their skills and interests. Explained a guidance counselor,

If a student doesn’t have a goal, their chances of dropping out are much higher. When I see students who are struggling or might be thinking about dropping out, I immediately hook students up with people on staff who can give them information about college and careers.

Counselors encourage students to meet with the high school’s career specialist, who first asks students to complete career aptitude tests and think about career paths that might be a good fit for their interests. The career specialist then talks with them about education and training requirements for particular careers, and even how much money they can expect to make. Noted the counselor, “I really want students to feel like they’re choosing a particular career path or a future educational goal, not just fulfilling graduation requirements.”

### **Instructional Adjustments**

Teachers and school administrators continually use student data and feedback from colleagues to evaluate, adjust, and align instruction. Teachers report that student data from formative assessments and state tests help them to identify gaps in instruction, or ways that instruction needs to be changed or tailored to individual student needs. A school administrator at the Linden School (Malden Public Schools, MA) noted that the baseline benchmark reading and math assessments conducted at the beginning of the year help teachers to identify specific areas of weakness. “The testing has really helped us pinpoint problems with individual students that we may not otherwise have found,” she said. “Once these individual issues are identified, teachers can tailor the in-class interventions to the student.” Assessment results can also help teachers adjust instruction in response to the strengths and weaknesses of entire groups of students. A Linden math teacher explained that she administers a pre-test before introducing a new curricular unit.

I’ll review the pre-test results, and then adjust my instruction accordingly, so that if all the students are strong in a particular area, I won’t spend as much time on that area, and I’ll spend more time on an area where the students need extra help. I also give a post-test after each unit, to see if there are concepts that need to be re-taught.

In collaborative meetings, teachers often review data in order to align instruction across grade levels, subjects, and classrooms. An administrator at Coolidge Elementary School (Flint Community Schools, MI) explained that educators at the school hold integrated, cross-grade meetings where teachers identify learning gaps or other issues that they see in students when students first come to their grade level. For example, 4th-grade teachers tell their 3rd-grade colleagues about learning gaps that concern them. In these meetings, they also discuss differences between different classrooms within a grade level and break down student test data by state standards. If one teacher's students are showing a high level of mastery of a particular state standard on the state tests and another teacher's students in the same grade are not, then the school leadership ensures that the two teachers discuss how they are each teaching this standard so that classroom instruction is more consistent within the grade level.

### Interventions for Struggling Teachers and Schools

Struggling teachers receive ample support and feedback. Administrators make sure that help is available not only for new teachers, but for struggling experienced teachers as well. At Doig Intermediate School in the Garden Grove Unified School District (CA), school leaders and administrators create an individualized improvement plan for each struggling teacher. The plan clearly establishes the needed areas of improvement and specifies the support the teacher requires. A school leader explained, "Each situation is different and

#### Key Findings: Instructional Adjustments

Teachers and school administrators continually use student data and feedback from colleagues to evaluate, adjust, and align instruction. Teachers report that student data from formative assessments and state tests help them to identify gaps in instruction, or ways that instruction needs to be changed or tailored to individual student needs.

unique in terms of what the individual's needs are." Support available for struggling teachers includes greater opportunities for collaboration and observation on campus, targeted staff development training, and assistance from district-level consultants and support staff.

Intervention for lower performing schools and struggling teachers centers on mobilizing district resources and support. In the North East ISD (TX), district leaders periodically review data on individual schools. When a school is not showing sufficient progress in raising student achievement, district and school leaders work together to identify the resources and support needed at the campus and develop a continuous improvement plan.

Instructional specialists gather performance data for the principal, help the principal analyze the data, and then talk about what that data means for instruction. Teachers receive professional development, often in the form of model teaching where instructional or content specialists go into classrooms and teach lessons. District leaders re-evaluate instructional resources at each campus and provide different resources if necessary.

In the Long Beach Unified School District (CA), district leaders constantly push schools to meet higher expectations and standards. Each year, district administrators work with lower performing schools to identify the weakest grade

levels and subject areas, as well as to set targets for acceleration and reduction of achievement gaps. To effectively address the identified weaknesses, district

### **Key Findings: Interventions for Struggling Teachers and Schools**

When a school is not showing sufficient progress in raising student achievement, district and school leaders work together to identify the resources and support needed at the campus and develop a continuous improvement plan.

administrators determine appropriate support, mobilize centralized coaching and available resources, and exert a system of internal control by making budgetary decisions on behalf of the school. In addition to intensive staff development, assistance from district coaches, and targeted student intervention, school leaders receive support from fellow district principals whose schools demonstrate high achievement with similar student populations. One district leader commented, “Compared to other urban districts, Long Beach has very few schools in need of serious improvement because of the way we rally support around to help the school.”

## Summary of Findings

### **Student Learning: Expectations and Goals**

*Consistently higher performing school systems share the goal of preparing all students for college and skilled careers. Even while serving large, high-need student populations, educators establish ambitious but attainable academic goals anchored to college-and career-readiness requirements. The curriculum development process begins with the state standards and builds upon them to generate a detailed written curriculum, with supporting curriculum documents that help guide instruction. District and school administrators seek teacher input and feedback throughout the curriculum development and revision process.*

### **Staff Selection, Leadership, and Capacity Building**

*District and school leaders in higher performing school systems focus on recruiting, developing, and retaining staff members who can deliver high-quality instruction and help students meet ambitious academic goals. Staff recruitment and selection focus on carefully matching candidates to the needs of specific schools. After recruiting and hiring high-quality teachers, school and district administrators offer their staff rich and varied professional development opportunities. District leaders offer leadership development opportunities to highly skilled teachers and administrators, as a way to retain talented staff within the school system. Teachers collaborate constantly, with achievement-focused collegial collaboration often creating an open door policy that allows teachers to feel it is normal to visit each others' classrooms and discuss what instructional tactics work and do not work.*

## Instructional Tools: Programs and Strategies

*In higher performing school systems, instructional programs and practices communicate a commitment to rigor for all students. When selecting new instructional programs, school and district administrators carefully research the programs' alignment with state standards and district curricular goals, and often pilot new programs prior to district-wide implementation. Feedback from teachers and school leaders plays a central role in these district processes. Teachers employ evidence-based instructional practices, characterized by high student engagement in classroom activities that demand higher-order thinking. Teachers also skillfully differentiate instruction to ensure that all students can reach high standards.*

## Monitoring: Compilation, Analysis, and Use of Data

*Districts conduct regular, data-driven monitoring of each school's progress towards meeting established academic goals. Teachers use frequent formal and informal assessments and district-developed benchmark exams to monitor student progress. To enable this monitoring process, district and school leaders provide teachers with formative assessment instruments aligned with the district curriculum and state standards. District leaders ensure that principals and teachers have the necessary skills to access and analyze assessment data. Informed by careful data analysis, teachers, school administrators, and counselors meet regularly to discuss student progress, identify learning gaps, and move all students towards mastery. Teachers, counselors, and school administrators also work to involve students and parents in ongoing progress monitoring. The monitoring process is highly collaborative, promoting a sense that everyone needs to work together to move students towards college and career readiness. School leaders use frequent classroom observations to further monitor instructional practice and curriculum delivery.*

## Recognition, Intervention, and Adjustment

*Teachers identify struggling students as early as possible and direct them towards a variety of proven intervention strategies to get them back on track towards college and career readiness. Schools offer intervention programs and resources during the school day, as well as outside of regular class time. To help motivate students to stay on track for graduation, teachers, school administrators, and guidance counselors encourage students to identify college and career goals that match their personal academic interests. Counselors often work individually with students to develop post-secondary goals. Teachers and school administrators continually use student data and feedback from colleagues to review, adjust, and align instruction. District and school leaders provide focused resources and support to quickly identify and assist teachers in need. If an entire school seems to be struggling, district leaders step in to help school leaders develop focused and specific improvement plans.*

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# Appendix



# Appendix:

## Profiles of Consistently Higher Performing Schools Studied

### California

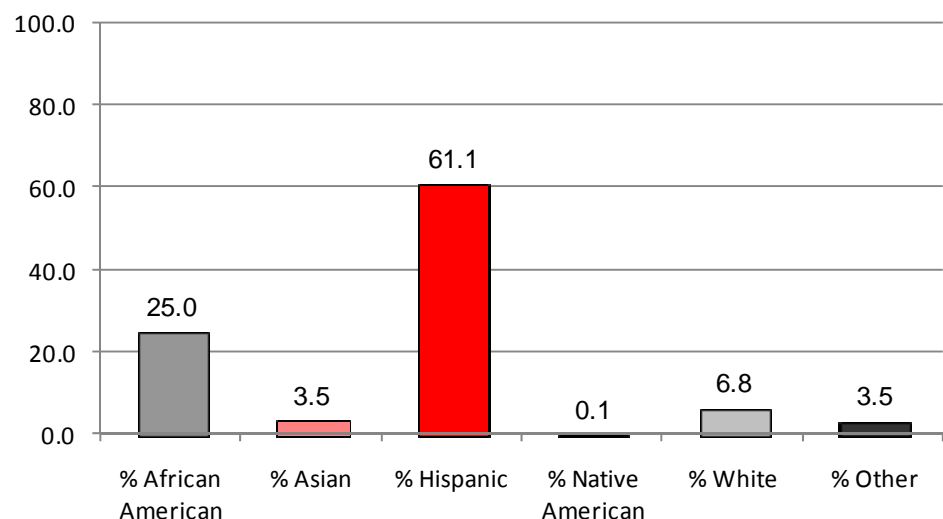
#### Centinela Valley Union High School District

Located in Los Angeles County, the Centinela Valley Union High School District serves students in three cities: Hawthorne, Lawndale, and Lennox. With three comprehensive high schools and one alternative continuation high school, the Centinela Valley district enrolls students from feeder school districts in the area. The total enrollment in the district, a diverse student population, is approximately 7,800.

#### Lawndale High School

One of the four high schools in the Centinela Valley school district, Lawndale High School enrolls 1,356 students, of whom approximately 65% are eligible for the federal free and reduced-price lunch program. More than half (61%) of the student population is of Hispanic descent. Based on a random lottery drawing, enrollment in Lawndale High School is open to any student in the attendance area. Priority placement exists for siblings of currently enrolled students as well as students interested in the two on-campus academies: the Marine Science Academy and AVID Academy.

#### School Demographics





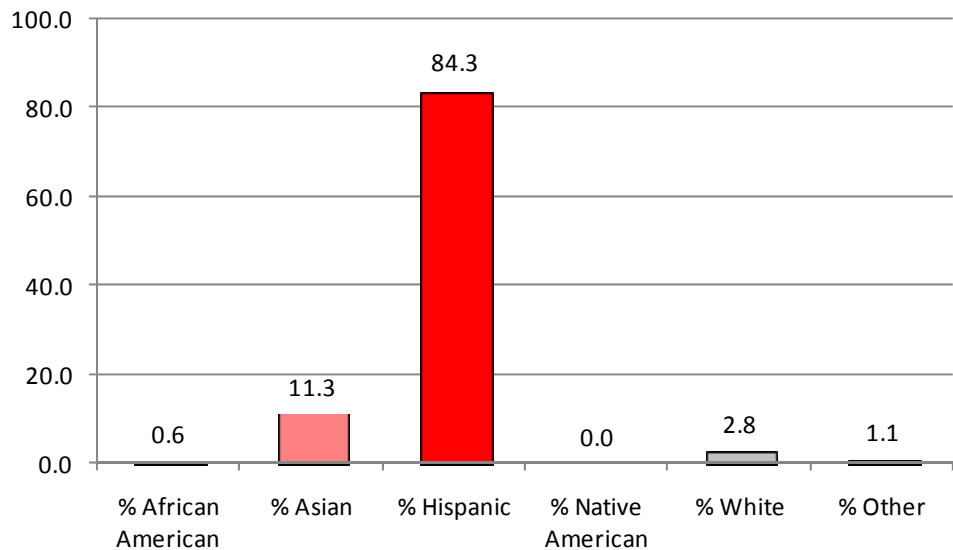
## Garden Grove Unified School District

The Garden Grove Unified School District was a finalist for the Broad Prize for Urban Education in 2002 and 2003 and won the honor in 2004. The Garden Grove Unified School District serves students from seven cities in Southern California: Anaheim, Cypress, Fountain Valley, Garden Grove, Santa Ana, Stanton, and Westminster. As the 11th largest school district in California, Garden Grove operates a total of 70 schools, including 47 elementary schools, 10 intermediate schools, 7 high schools, and 2 alternative continuation schools. The district has a total enrollment of 48,450 students, of whom approximately 60% qualify for the free and reduced-price lunch program. The district also serves a large number of English language learners. The student population is diverse throughout the district: 55% of the students are Hispanic, followed by 28% Asian students. Vietnamese students comprise the largest subgroup of Asian students.

### Doig Intermediate School

Serving 851 students in seventh and eighth grades in the Garden Grove Unified School District, Doig Intermediate School is a national AVID demonstration school. A Title I school, approximately 84% of the student population qualifies for free and reduced-price lunch. Additionally, many students at Doig are English language learners.

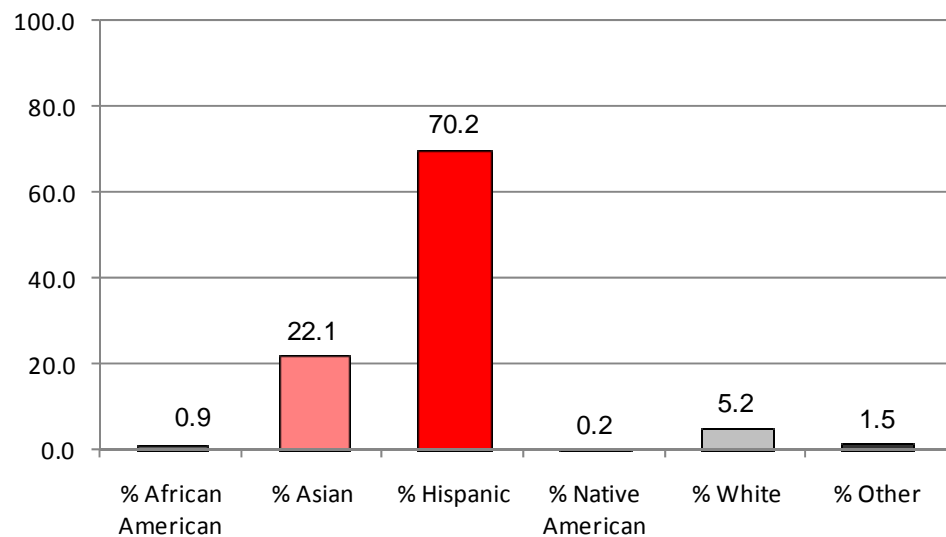
### School Demographics



## Los Amigos High School

With a total enrollment of 2,182 students, Los Amigos High School is a Title I school, with more than 70% of the student population eligible for the free and reduced-price lunch program. Approximately 70% of the students at the school are English language learners. The majority (70%) of students are Hispanic. Los Amigos High School offers a variety of Advanced Placement courses and has received recognition from *Newsweek* as one of the top 450 schools in the country for the number of its students passing the AP tests.

## School Demographics



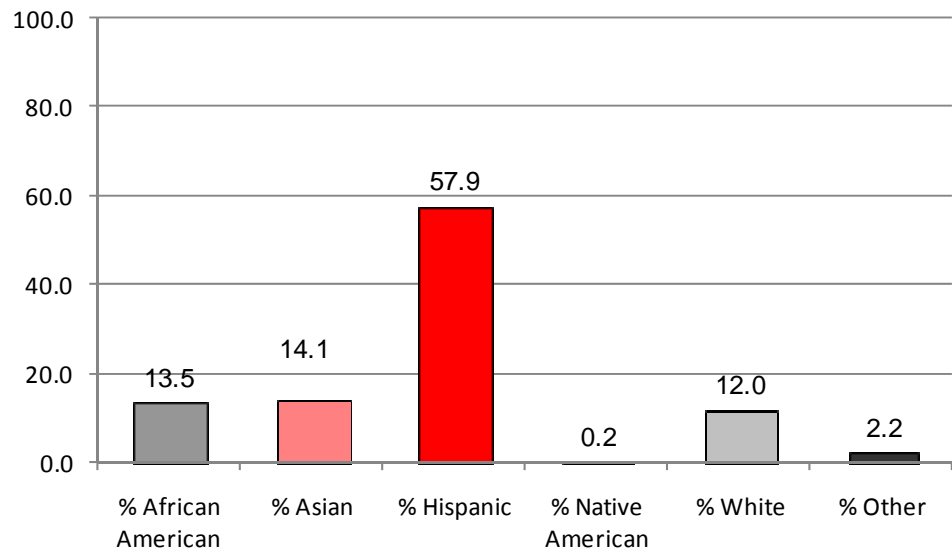
## Long Beach Unified School District

The third largest school district in California, the Long Beach Unified School District was the winner of the Broad Prize for Urban Education in 2003 and a finalist in 2002, 2007, and 2008. The Long Beach school district operates 93 schools and serves almost 90,000 students. The district uses a School of Choice student enrollment policy. Schools in the district admit students on a first-come first-served basis, with neighborhood children given the first priority for enrollment. Approximately 25% of the students are English language learners. About half of the student population is of Hispanic descent, with African American and White students each accounting for approximately 17% of those enrolled.

### Hill Classical Middle School

Located in east Long Beach, Hill Classical Middle School serves 1,117 students, of whom 82% qualify for free and reduced-price meals. About 8% of the students at the school are English language learners. Hispanic students make up the largest subgroup, at 58%, and African American and Asian students comprise the second largest groups. Hill Classical Middle School has received the California Distinguished School recognition and the National Blue Ribbon School award.

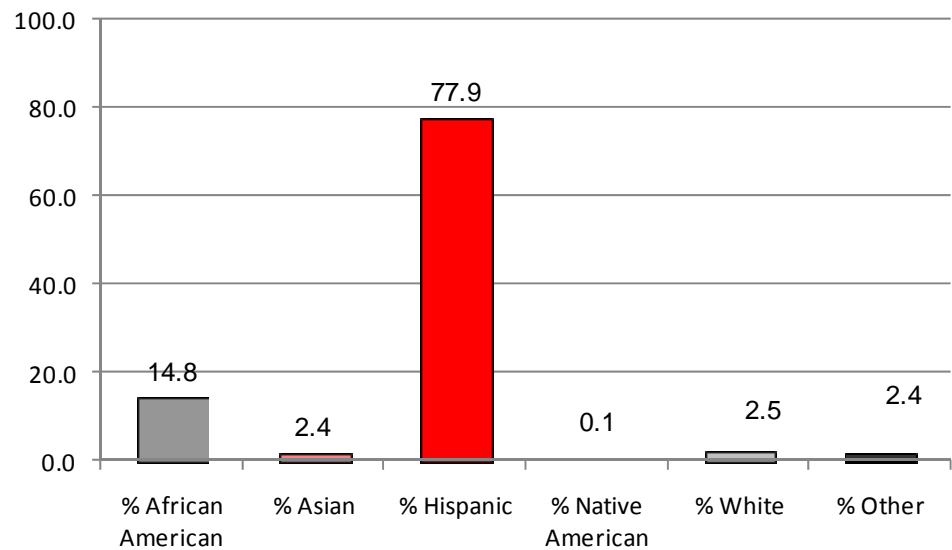
### School Demographics



## International Elementary School

Located in downtown Long Beach, California, International Elementary School enrolls 723 students, with almost 99% of the students receiving free and reduced-price lunch. At least 77% of the enrolled students are English language learners. International Elementary School has been the recipient of the California Distinguished School award, and the school received the Elementary STAR awards in 2002 and 2003.

## School Demographics



# Florida

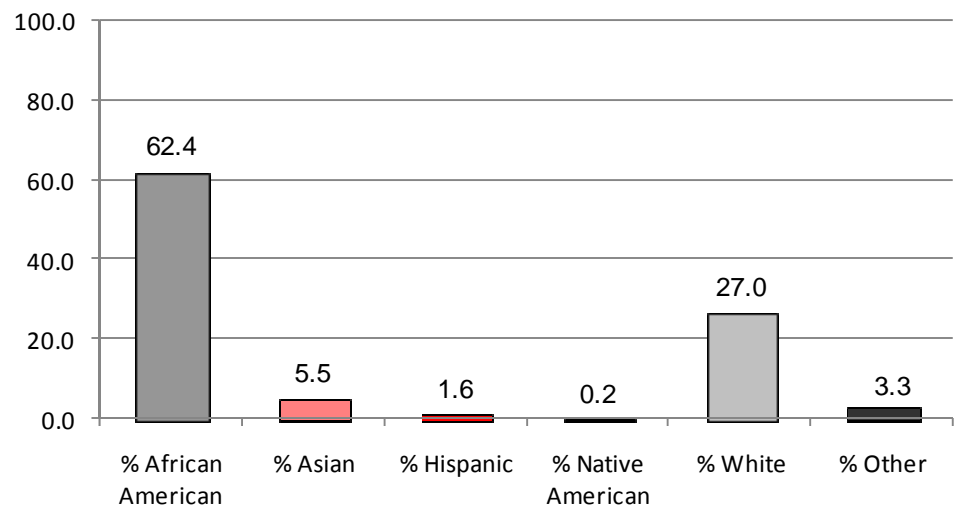
## Leon County Schools

Serving the Florida state capitol of Tallahassee, Leon County Schools enroll 34,100 students. The school district operates 48 schools, including 24 elementary schools, 9 middle schools, and 6 high schools. English language learners make up 1% of the students served, and approximately 37% of the students are eligible for free and reduced-price lunch. White and African American students account for approximately 90% of the district's student population, at about 50% and 40% respectively.

### Fairview Middle School

Having first opened its doors in 1970, Fairview Middle School currently serves 830 students, of whom 54% receive free and reduced-price lunches. African American students are the largest subgroup, at about 62%. Only 0.5% of the students are English language learners. Fairview Middle School established a pre-International Baccalaureate program in the late 1990s, admission to which requires students to go through an application process. Currently, the program serves approximately one-third of the entire student population.

## School Demographics



## Miami-Dade County Public Schools

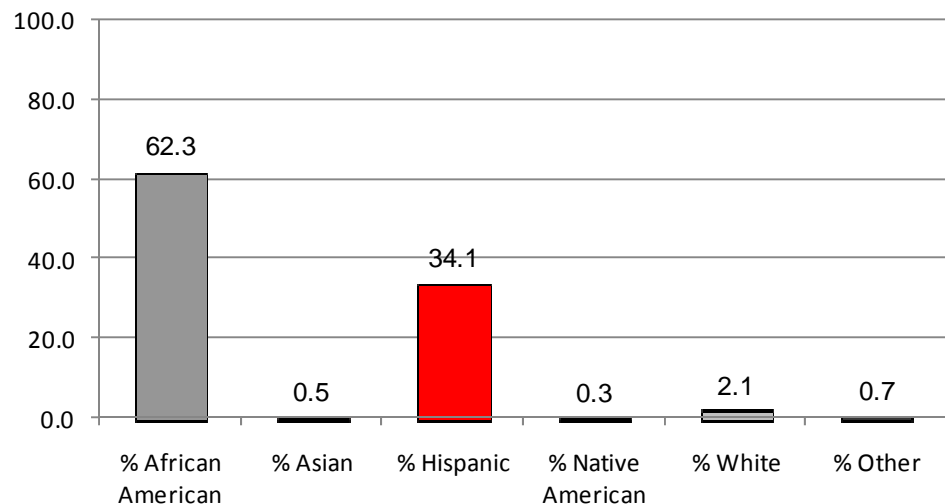
The Miami-Dade County Public School system is the fourth largest district in the United States. A finalist for the Broad Prize in Urban Education in 2006, 2007, and 2008, Miami-Dade serves a diverse population of more than 350,000 students in 378 schools. The majority (68%) of the students are eligible for free and reduced-price meals, and 16% are English language learners.

### William H. Turner Technical Arts High School

More than 1,700 students attend William H. Turner Technical Arts High School. Approximately 62% of the students are African American and 34% are Hispanic. Approximately 2% of the students are English language learners, and 89% qualify for free and reduced-price meals.

William H. Turner Technical Arts High School is a school of choice, but admissions are not selective. The district accepts applications for all schools of choice and assigns students to schools through its controlled choice program. The district does not base assignment on students' prior academic performance or test scores. All students at Turner Tech enroll in one of seven academies, each related to a particular career path. Students select their preferred academy when applying to the school. Students remain with the same academy for all 4 years of high school and receive the individualized attention that comes from membership in a small learning community.

## School Demographics



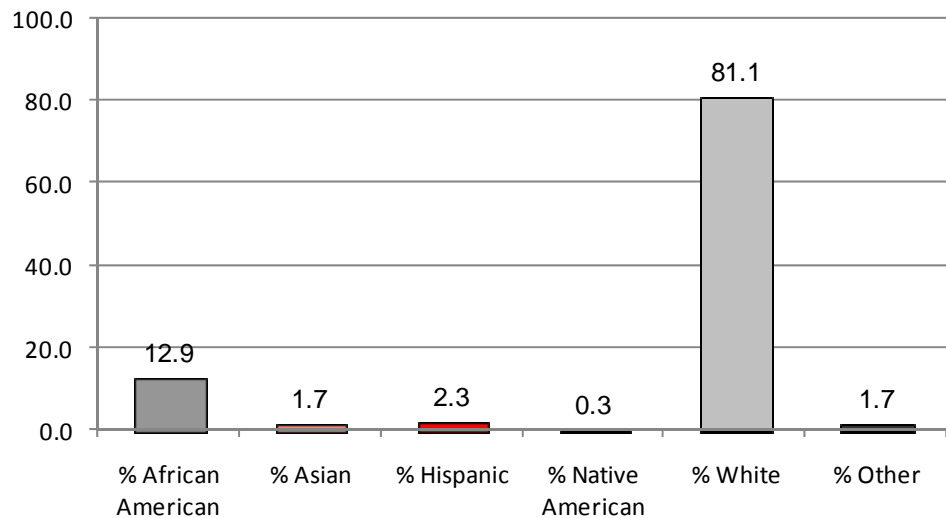
## Santa Rosa County School District

Located in the Florida Panhandle, the Santa Rosa County School District serves approximately 26,000 students and operates a total of 38 schools, including 17 elementary schools, 7 middle schools, and 6 traditional high schools. Approximately one-third (32%) of the student population qualifies for free and reduced-price meals.

### King Middle School

King Middle School is located in the city of Milton in Santa Rosa County. The school enrolls 604 students, of whom 61% receive free and reduced-price meals. The majority of the students at King Middle School are White (81%), followed by African American students (13%) and Hispanic students (2%). Because of its proximity to a military base, the school serves many students from military families.

### School Demographics



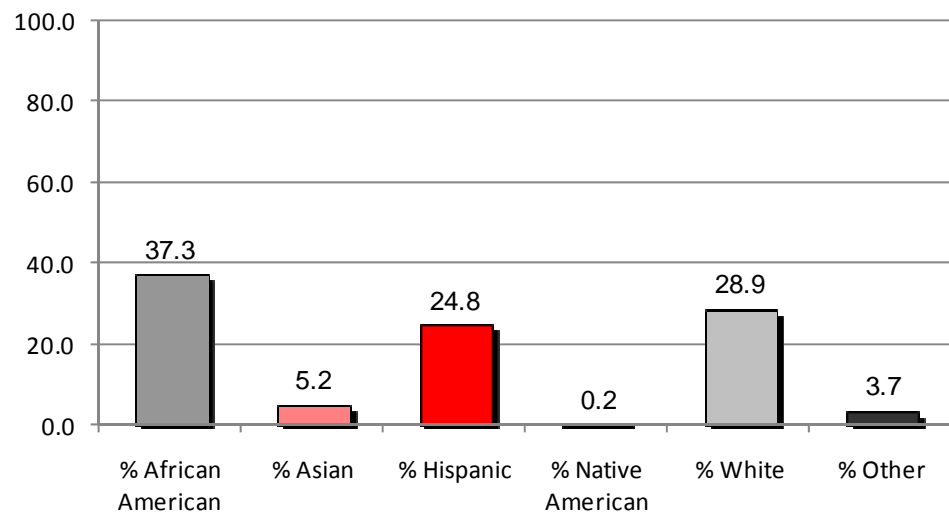
## The School District of Hillsborough County

Serving approximately 190,000 students, the School District of Hillsborough County operates 209 schools. In addition to 136 elementary schools, the district operates 42 middle schools and 25 high schools. The School District of Hillsborough County serves a diverse student population, comprised of 42% White students, 27% Hispanic students, and 22% African American students. English language learners make up approximately 11% of the total student population, and 50% of the students qualify for free and reduced-price lunch.

### Tampa Bay Technical High School

Established in 1969, Tampa Bay Technical High School enrolls students with a nearly even mix of ethnicities. Tampa Bay Tech offers a variety of vocationally focused technology programs and two magnet programs: the Academy of Health Professions and the Architectural Academy. To attend Tampa Bay Tech, students must complete a data-based application process, which includes a written essay. Students can enroll in the chosen programs either in their freshman year or in consequent years.

### School Demographics





# Massachusetts

## Boston Public Schools

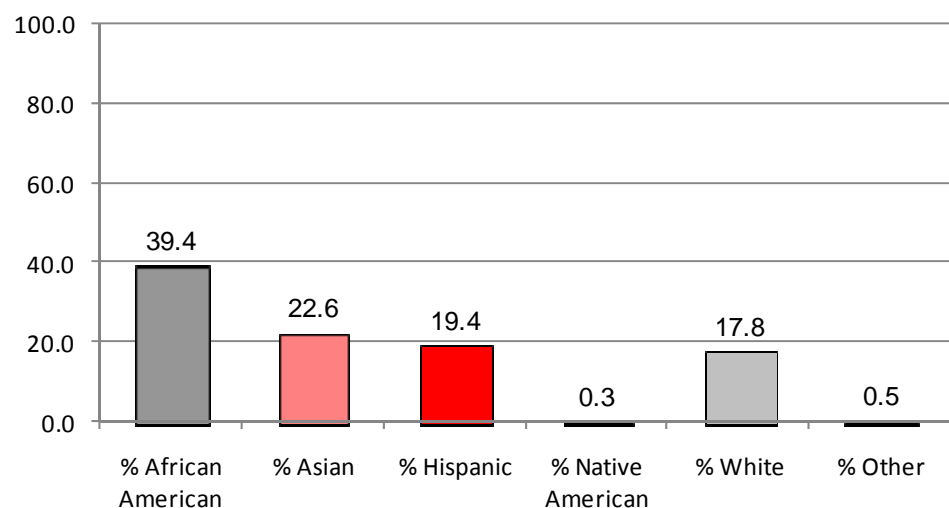
The Boston Public Schools is a large urban district serving approximately 56,000 students in 144 schools. In 2006, The Boston Public Schools received the \$1 million Broad Prize for Urban Education. The district was a Broad Prize finalist from 2002 through 2005. Approximately 74% of Boston students are eligible for free and reduced-price meals.

All high schools in Boston are citywide schools, with any student in the district able to apply to attend a particular school. The district uses a computerized lottery system to determine admission to most district high schools.

### Excel High School

Excel High School is a college preparatory high school serving 336 students in grades 9 through 12, with 64% of the students eligible for free and reduced-price meals. The school serves a diverse student body, including several English language learners (13% of all students). The school offers a sheltered English immersion program for Vietnamese students. Excel High School is one of the three small high schools housed in the South Boston Educational Complex. The three schools in the complex share facilities, extracurricular activities, and some non-instructional staff support positions. Otherwise, the schools operate independently, with their own headmasters, teachers, and students. The state accountability system measures each school's performance separately, and each school has its own goals and areas of focus.

## School Demographics

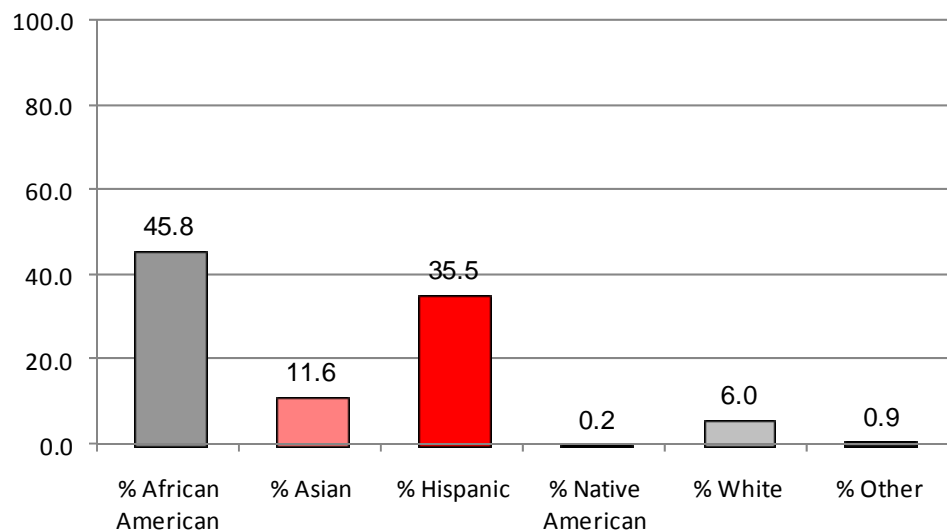


## Snowden International High School at Copley

Snowden International High School is a college preparatory high school with a focus on international studies and world languages. The school is housed in four separate buildings in the Copley Square area of downtown Boston. Of Snowden's 448 students, 66% are eligible for free and reduced-price meals. The majority of the school's students are African American and Hispanic. Approximately two percent of Snowden students are English language learners.

Snowden's curriculum and graduation requirements reflect the school's dual focus on college preparation and international studies. All students at the school must take core academic courses for all 4 years, including 4 years of the same foreign language. Foreign language offerings include Spanish, French, Japanese and Mandarin. The school does not offer honors classes or remedial classes. Advanced Placement courses are available in composition, European history, and calculus.

## School Demographics



## Cambridge Public Schools

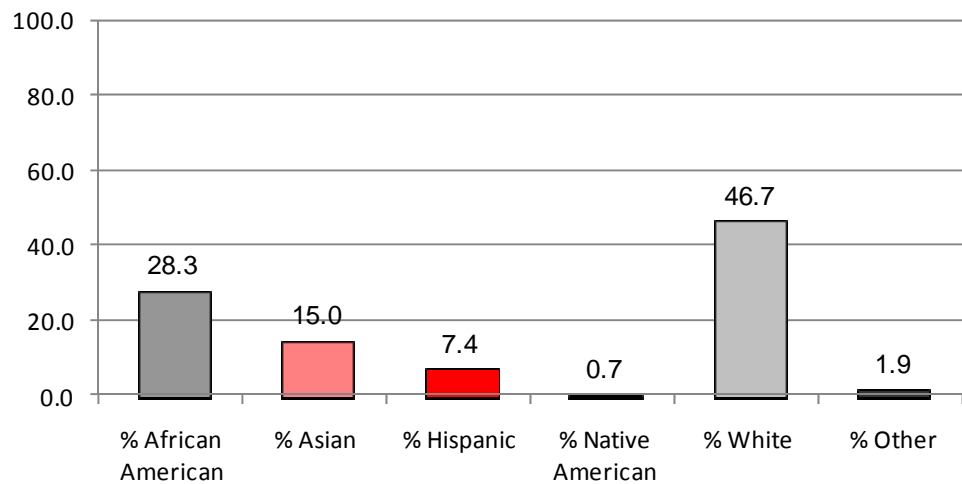
The Cambridge Public Schools is a small urban district serving approximately 5,680 students at 15 schools: 12 elementary and K-8 schools, and 1 high school. There are no stand-alone middle schools in the district. The district is located in the city of Cambridge, best known as the home of Harvard University and the Massachusetts Institute of Technology.

### Graham and Parks School

The Graham and Parks School serves 420 students in kindergarten through eighth grade. Approximately 37% of the students are eligible for free and reduced-price meals, and 17% of the students are English language learners. The school offers a sheltered English immersion program for Haitian students. School leaders pride themselves on the high level of parental involvement and teacher empowerment in all aspects of school decision-making. The school's motto is "Building a Democratic School Community."

Although Graham and Parks is a K-8 school, NCEA researchers selected the school for study participation based on the academic performance of students in the middle school grades only.

## School Demographics



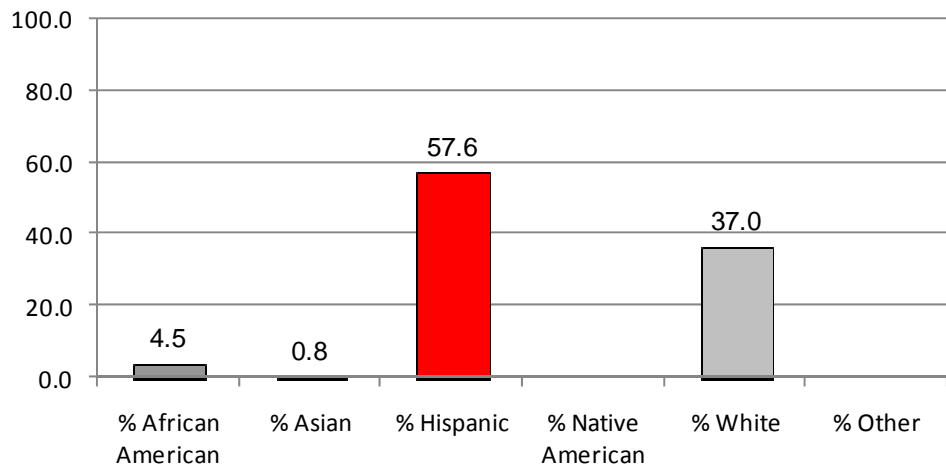
## Holyoke Public Schools

The Holyoke Public Schools serves 6,500 students in 13 schools. Holyoke is a small city of approximately 40,000 located in western Massachusetts. Once known as the “The Paper City,” in recent years Holyoke has fallen on hard economic times after losing many of its paper mill factories and transitioning to a service-based economy. More than three-quarters (77%) of district students are eligible for free and reduced-price meals. Three-quarters (75%) of district students are Hispanic.

### Holyoke High School

Holyoke High School, the district's only traditional high school, serves approximately 1,250 students. More than half (58%) of Holyoke High School students are eligible for the federal free and reduced-price lunch program, and 9% are English language learners. The school serves a high-need student population, with the school reporting that 20% of its students are homeless, live in shelters, or live with foster families. The school's stated vision is to “ensure that all students are provided the opportunity to acquire the knowledge and skills needed to graduate prepared to pursue higher education without remediation and/or a rewarding career and to function as responsible citizens in a diverse society.”

## School Demographics



## Lowell Public Schools

The Lowell Public Schools is located in Lowell, Massachusetts (population 105,000), a mid-sized urban district north of Boston. A former manufacturing center for the textile industry, the city fell on economic hard times with the decline of its manufacturing companies in the 20th century. The city's economy has rebounded in recent years, and the restoration of the former mill district along the Merrimack River in downtown Lowell is part of an ambitious urban revitalization program. Approximately 13,500 students attend the district's 23 schools. The Lowell Public Schools serves a diverse student body, including students from Brazil, Colombia, Cambodia, and countries in Africa.

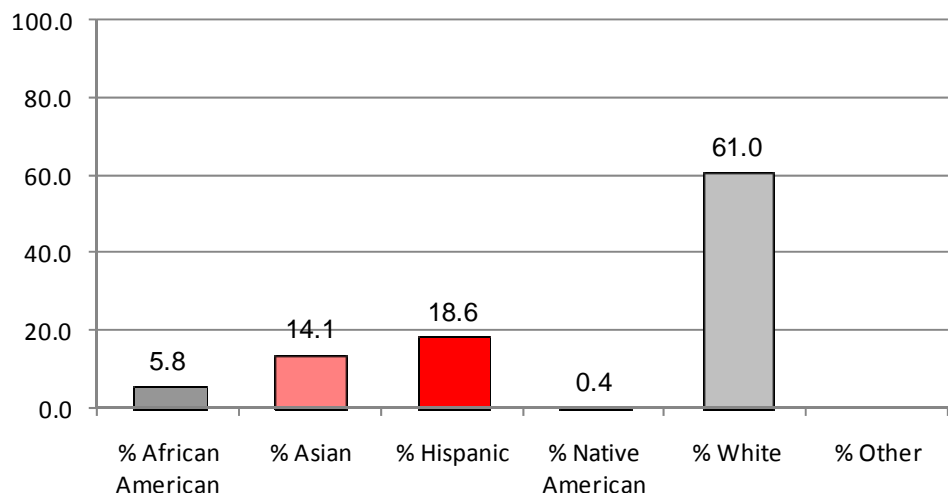
### Pyne Arts Magnet School

The Pyne Arts School serves approximately 450 students in pre-kindergarten through eighth grade. The magnet school enrolls students from throughout the city of Lowell, with students admitted to the school according to the district's centralized controlled choice student assignment plan. Approximately 60% of Pyne Arts students are eligible for the free and reduced-price lunch program.

As a magnet school, the school curriculum includes an emphasis on the arts. In addition to following the district curriculum in core subjects, students take elective courses in music, theater and visual arts. School administrators view the arts curriculum as another method of building students' academic skills.

Though the school serves pre-kindergarten through 8th-grade students, NCEA researchers selected the Pyne Arts School for the Math and Science Study based on the student achievement results in the middle school grades (5-8) only.

## School Demographics



## Malden Public Schools

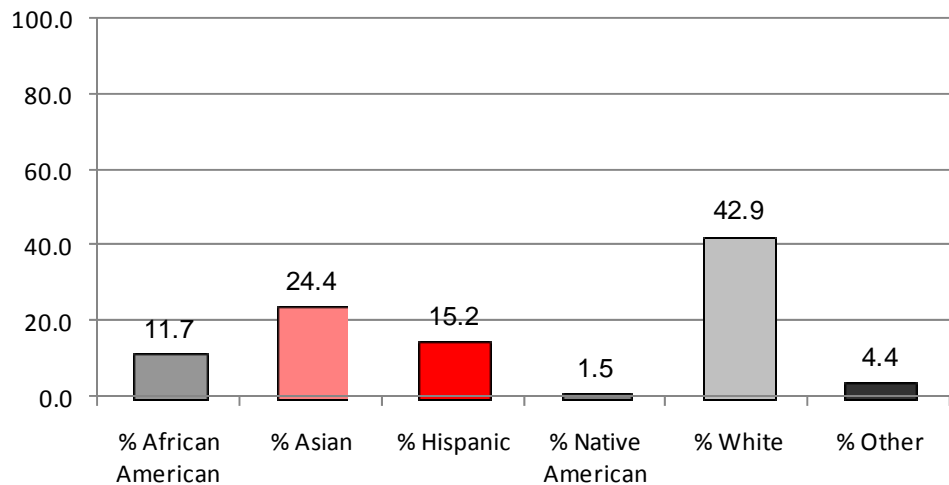
The Malden Public Schools serves 6,387 students in seven schools. The town of Malden is a small city of 58,000 located just outside Boston. More than half (52%) of district students are eligible for free and reduced-price meals, and 10% are English language learners. The district's stated mission is to provide a "safe and respectful learning environment that maximizes opportunities for success in career, citizenship, and life for our diverse student community."

### Linden School

The Linden School is a K-8 school serving 800 students. The school serves a highly diverse student population: 44% of the students are White, 24% are Asian, 15% are Hispanic, and 12% are African American. Just fewer than half (46%) of Linden students are eligible for free and reduced-price meals, and 11% are English language learners.

Though the Linden School serves elementary and secondary students, the school was chosen for study participation based on the academic performance of students in the secondary grades (5-8) only.

## School Demographics



# Michigan

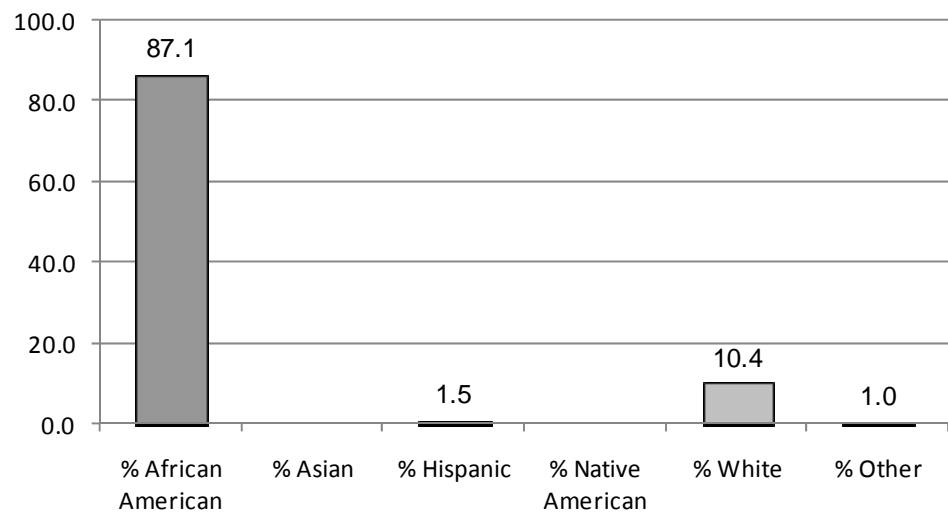
## Flint Community Schools

The Flint Community Schools serves 18,081 students in 39 schools. Approximately 80% of the students are African American. Formerly a manufacturing center for the U.S. automobile industry, the city of Flint (population 125,000) has suffered from high unemployment and economic decline in recent years after General Motors closed several plants in the area. As a result, the district serves a high-need student population, with 72% of the students eligible for free and reduced-price meals.

### Coolidge Elementary

Coolidge Elementary School serves 412 kindergarten through 6th-grade students. Coolidge's student population is 88% African American, 10% White, and 1% Hispanic. Within this student population, 75% receive free and reduced-price lunch services.

## School Demographics



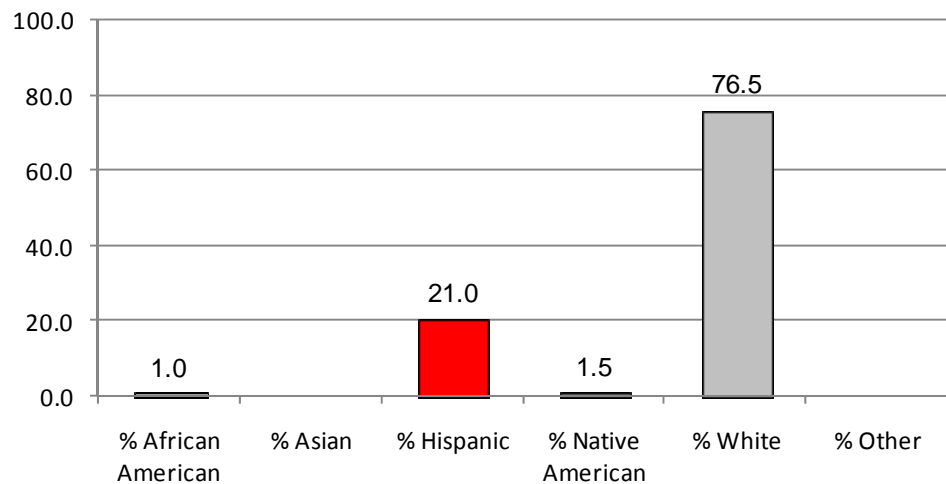
## Shelby Public Schools

Enrolling approximately 1,700 students, Shelby Public Schools operates three elementary schools, one middle school, and one traditional high school in the agriculturally focused township of Shelby. Located in a rural area, Shelby has a high percentage of families living in poverty and a large number of non-English speaking families.

### Shelby High School

As the only high school in Shelby Public Schools, Shelby High School serves a total of 481 students, of whom 41% are eligible for free and reduced-price meals. The majority (77%) of the students are White, and Hispanic students are the second largest group, at 21% of the school population. African American and Native American students are the other major subgroups, at approximately 1% each.

### School Demographics

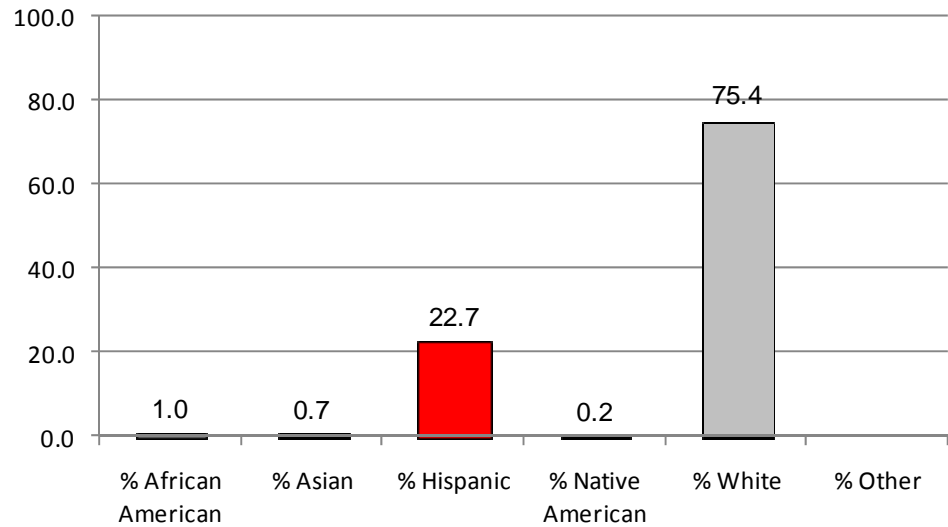




### Shelby Middle School

A Title I school, Shelby Middle School is the only middle school in Shelby Public Schools. The school enrolls 414 students, of whom 52% qualify for free and reduced-price lunch. The majority of the students are White, and the school serves a fairly large Hispanic population that accounts for 23% of the total enrollment. Other student subgroups include African American and Asian, each making up approximately 1% of the student body.

### School Demographics



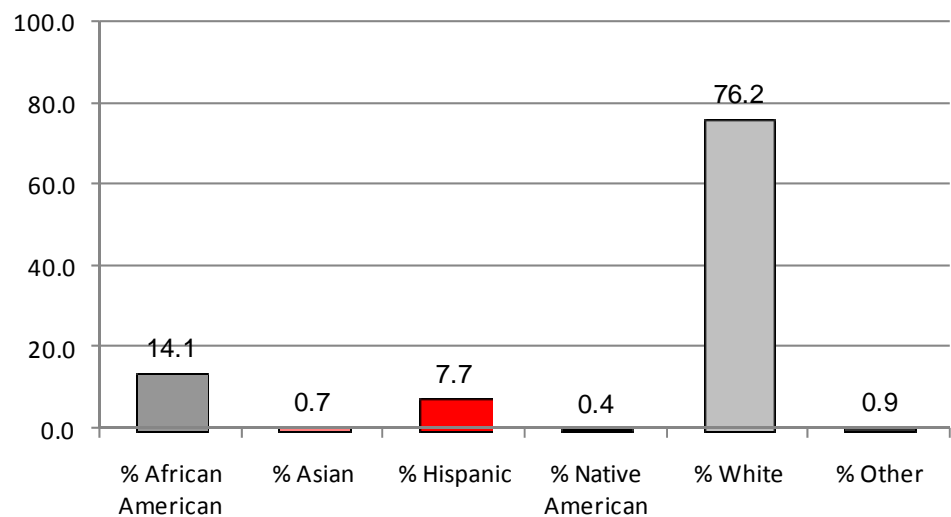
## South Haven Public Schools

Located in a suburban area near Lake Michigan, South Haven Public Schools serves a total of 2,300 students in seven schools, including three elementary schools, one middle school, and one high school. The population in the city of South Haven fluctuates throughout the year as many nearby Chicago-area residents spend their summer in the area.

### South Haven High School

Serving 802 students, South Haven High School is the only high school in the district. Approximately 45% of the students qualify for free and reduced-price lunch. Most (76%) of the students are White, and African American students are the second largest subgroup on the campus, at about 14%. Hispanic students account for 8% of the student population.

### School Demographics



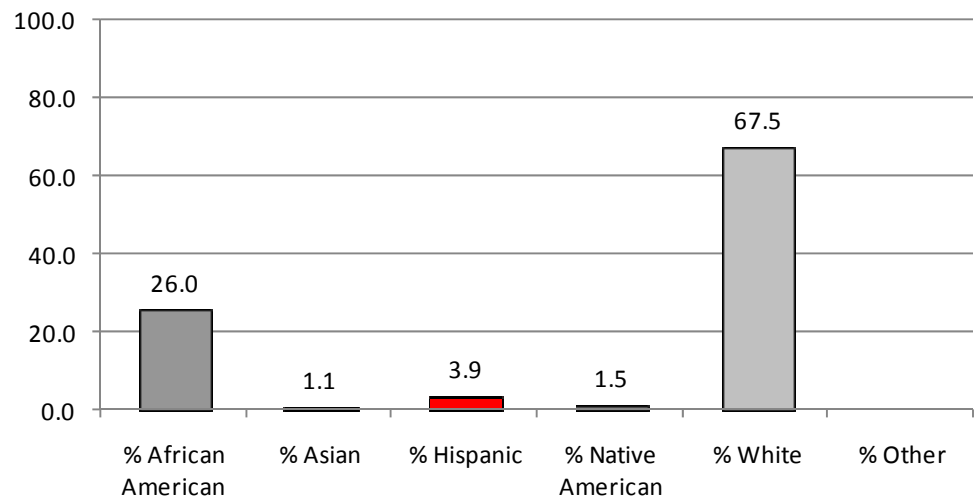
## Wayne-Westland Community Schools

With an enrollment of approximately 13,600 students, the Wayne-Westland Community Schools serves students from the cities of Wayne, Westland, Canton, Dearborn Heights, Inkster, and Romulus. The school district operates 17 elementary schools, 4 middle schools, and 2 traditional high schools.

### Adams Middle School

One of the four middle schools in the Wayne-Westland Community Schools, Adams Middle School enrolls 720 students, of whom 60% receive free and reduced-price lunch. The majority of the student population is White, and the largest minority group is African American. The Hispanic population accounts for about 4% of the enrolled students. Adams Middle School was a finalist for the National School Change Award and the NASSP Breakthrough Schools award in 2008.

### School Demographics



# Texas

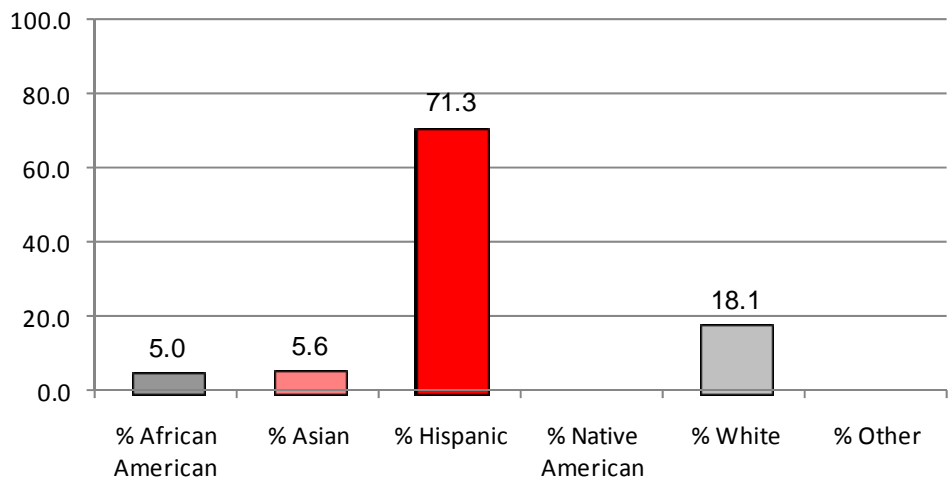
## Carrollton-Farmers Branch Independent School District

Located in the Dallas metropolitan area, Carrollton-Farmers Branch Independent School District serves nearly 26,500 students. The district operates 41 schools, including 27 elementary schools, 6 middle schools, and 5 high schools. Approximately half of the students enrolled in the district are of Hispanic descent, 24% of the students are White, 14% are African American, and 11% are Asian.

### Perry Middle School

Perry Middle School enrolls approximately 1,000 students, of whom 72% receive free and reduced-price lunch and 19% are English language learners. Most (71%) of the enrolled students are Hispanic, 18% are White, 5% are African American, and 6% are Asian.

### School Demographics



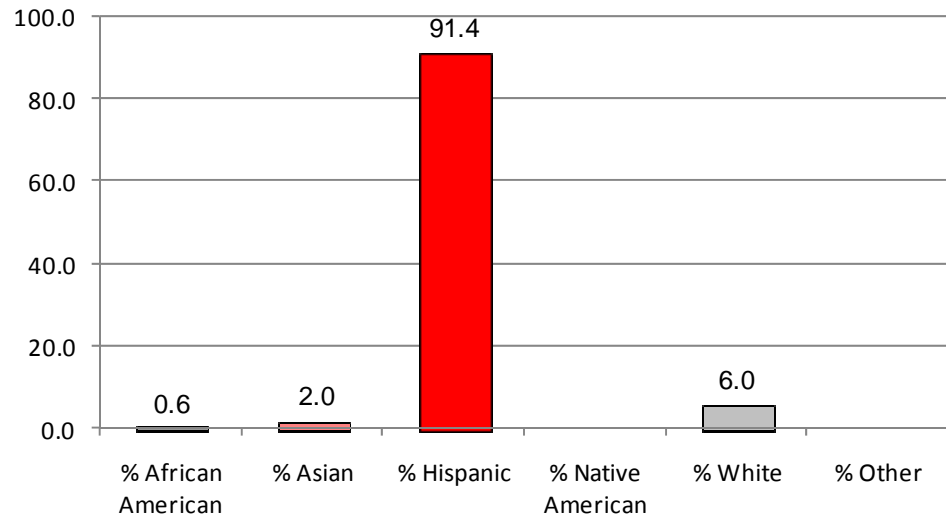
## McAllen Independent School District

The McAllen Independent School District serves approximately 24,600 students in 30 schools. The district is located in McAllen, a city of 130,000 located in the Rio Grande Valley in south Texas. The Texas-Mexico border lies only a few miles away from McAllen. Approximately 85% of district students are Hispanic. Approximately 70% of McAllen students are eligible for free and reduced-price meals, and 32% are English language learners.

### Rowe High School

Rowe High School is one of three traditional high schools in the district, enrolling 2,038 students. More than half (61%) of Rowe High School students are eligible for the federal free and reduced-price lunch program. The majority (91%) of the students at Rowe High School are Hispanic, and 25% are English language learners.

## School Demographics



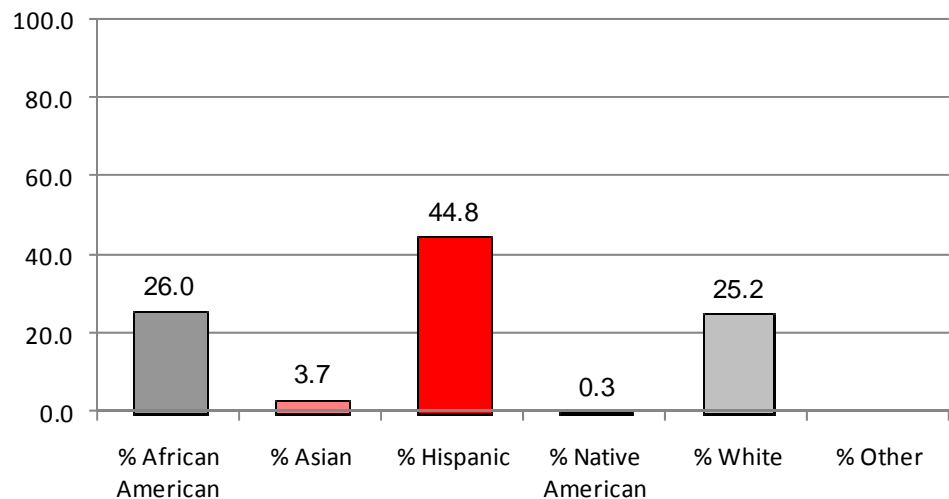
## North East Independent School District

With an enrollment of 62,000 students, the North East Independent School District operates a total of 70 campuses, including 42 elementary schools, 13 middle schools, and 7 high schools. Students come from the city of San Antonio and several neighboring communities. Approximately 40% of the students qualify for free and reduced-price lunch. Just fewer than half (47%) of the students are Hispanic, with White students accounting for the second largest student group, at 40%. African American students and Asian students account for 9% and 4% of the population, respectively.

### Roosevelt High School

Roosevelt High School enrolls approximately 2,400 students, of whom 54% are eligible for free and reduced-price meals. Approximately 3% of the students are English language learners. Nearly half of the student population (45%) is of Hispanic descent and 26% are African American. Roosevelt High School houses two magnet programs, the Design and Technology Academy and the Engineering and Technology Academy.

## School Demographics



## South Texas Independent School District

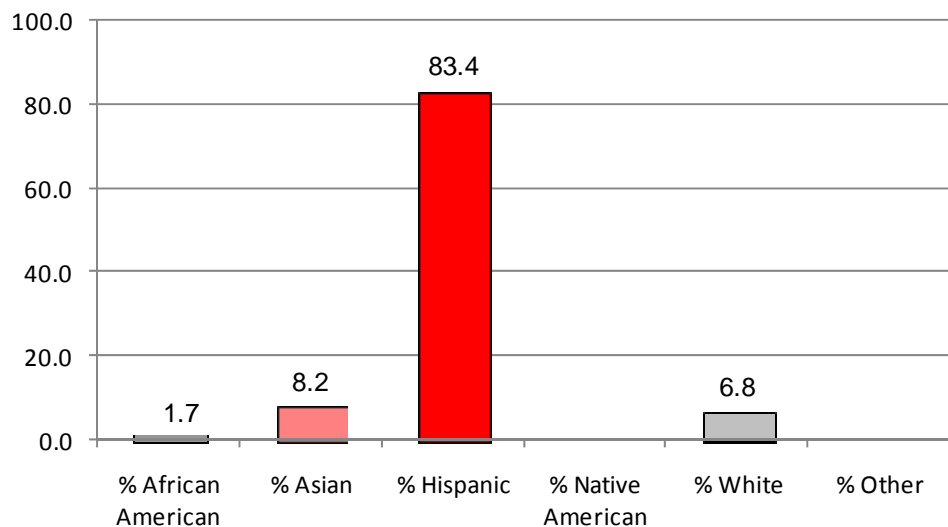
Four secondary schools comprise the South Texas Independent School District, serving 2,454 students. District schools are in the towns of Mercedes, San Benito, and Edinburg, located in the Rio Grande Valley in south Texas near the Texas/Mexico border. South Texas ISD recruits students from 28 area school districts. Though all of the district’s three high schools and one junior/senior high school are magnet schools, they accept students on a first-come, first-served basis. The district provides free bus transportation to all its students. Each district school centers around a particular career theme. The district’s mission is to identify career needs in the Rio Grande Valley area and train students to fill these needs.

### The High School for Health Professions

Located in Mercedes, Texas, the High School for Health Professions serves 661 students in grades 9 through 12. The school’s career theme focuses on the health career field. Students take health science electives designed to train them for careers in a variety of health professions, such as dental and nursing assistants, pharmacy technicians, nutritionists, and veterinary assistants. During their senior year, students complete clinical internships at area hospitals and health practices.

The school’s student population is 83% Hispanic. Approximately 55% of students receive free and reduced-price lunch services, and 2.3% are English language learners.

### School Demographics



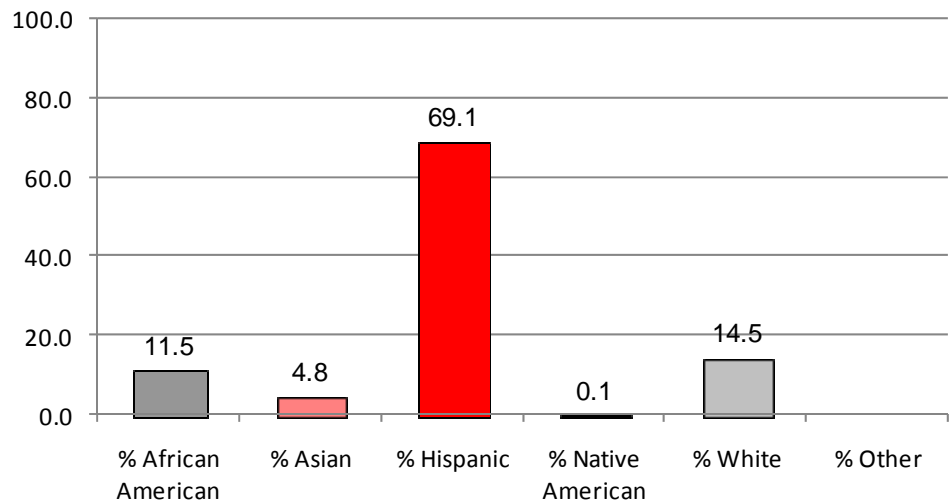
## Spring Branch Independent School District

The Spring Branch Independent School District serves 32,160 students in a total of 47 schools. Located in the greater Houston area, the district enrolls a diverse student population. Approximately 53% of district students are Hispanic, 33% are White, 8% are African American, and 6% are Asian.

## Spring Oaks Middle School

Spring Oaks Middle School serves 811 students in grades 6 through 8. The U.S. Department of Education recognized Spring Oaks as a national "Blue Ribbon" School in 1996. The majority (78%) of Spring Oaks students are eligible for free and reduced-price meals, and 21% are English language learners.

## School Demographics





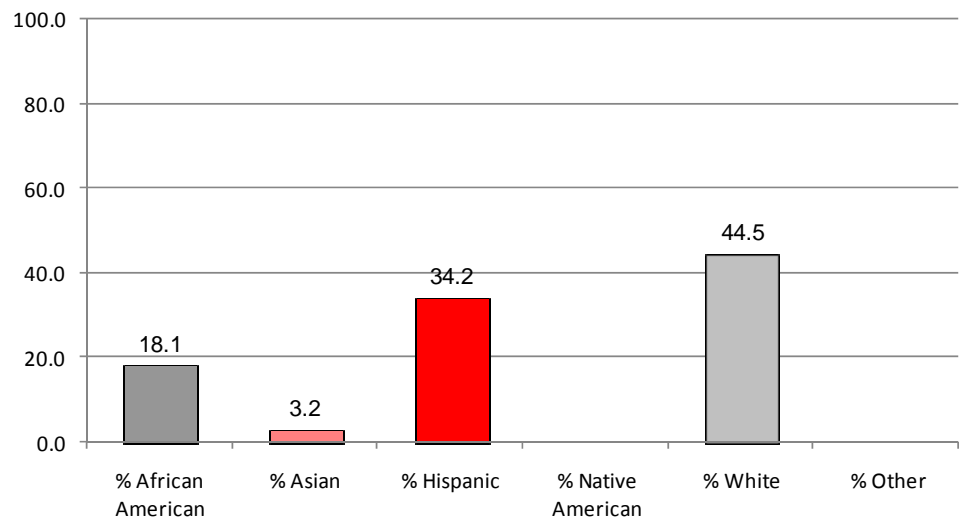
## Temple Independent School District

Located in central Texas, Temple Independent School District enrolls approximately 8,300 students on 17 campuses, including nine elementary schools, three middle schools, and one high school. Temple ISD was the first central Texas school district to offer the International Baccalaureate diploma. In addition, about 190 students in the Temple school district have received the National Merit Scholar Award.

### Bonham Middle School

Bonham Middle School is one of the three middle schools in Temple Independent School District. Serving more than 500 students, Bonham Middle School has twice been recognized as a consistently higher performing middle school by the *Texas Monthly* magazine. Among enrolled students, 57% receive free and reduced-price lunches, and 8% are English language learners. Just fewer than half (45%) of the students are White, 34% are Hispanic, 18% are African American, and 3% are Asian.

### School Demographics



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## **NCEA | ACT**

In 2007, the National Center for Educational Achievement (NCEA) and ACT, Inc. joined to strengthen their impact on student college and career readiness (CCR) by providing high-quality, research-based tools and services to K-12 educators. NCEA is a non-profit organization and an established leader in the use of data and best practice research to foster school improvement. ACT is an international not-for-profit organization whose mission is helping people achieve education and workplace success.