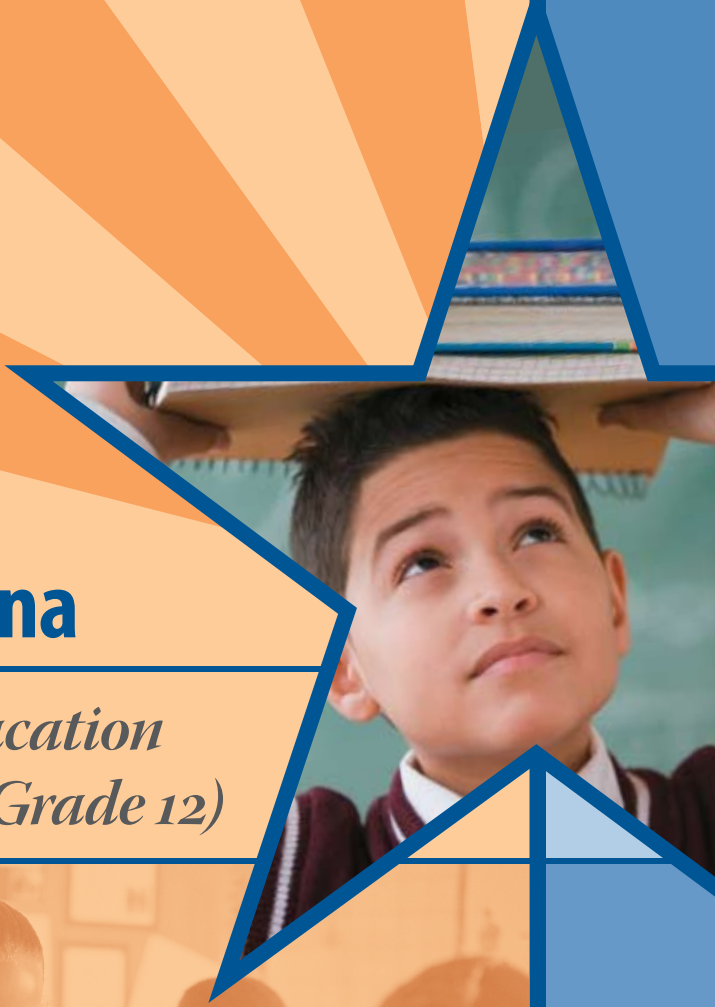

Educating Arizona

Assessing Our Education System (Birth–Grade 12)

January 2008

ARIZONA COMMUNITY FOUNDATION

ELLIS CENTER FOR EDUCATIONAL EXCELLENCE

Acknowledgments

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Contents

Dear Reader:

Of every 10 students entering Arizona's high schools, only seven graduate. Of those seven graduates, only four continue to college. Of those four in college, only two earn a degree. That is not good enough — not for our children, not for Arizona.

In 2005, the John Ellis family funded the Ellis Center for Educational Excellence and provided an endowment to the Arizona Community Foundation with the goal of supporting public education improvement in Arizona. As a first step in our work, both governing boards have joined forces to produce this report.

A significant barrier we face in striving for improvement is the lack of agreement on how we're doing as a state. Some people will tell you that we're doing just fine. Others will say it's all bad. The truth lies somewhere in between, and what is needed is an objective, impartial reviewing of the state's education data so every citizen can decide.

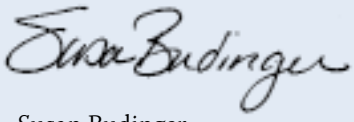
Whether you look at our national test results, which place us firmly in the bottom 15 states, or our state test results, with passing rates of 60 to 75 percent, we have nothing to brag about. Also consider that our high school exit test measures 10th grade skills while the real world of work and higher education demand at least 12th grade capabilities. Other nations and some states are leapfrogging ahead in their educational achievements. Unless we change course, the real losers are our children, who will pay the price when they leave school and have to compete against not only other American children but, in our global society, also against children from Ireland to Singapore, Brazil and China.

Indeed, Arizona has its challenges. An exceptionally large proportion of our school-aged population is poor or learning to speak English. However, we can't blame this demographic reality for our low standing because even on the most important national tests, the scores of our more privileged students also land in the bottom tier of states. We're falling short across the board but especially with the students who need our support most and are the fastest growing segment of our population.

Closing these gaps will require improvements in many areas: quality early care and education; stronger standards and accountability; enhanced teaching and leadership; better choices; and increased funding.

The time for improvement is long overdue. We deserve to know where we stand and must learn from the pockets of excellence that demonstrate what's possible. Hopefully, this nonpartisan and comprehensive report, detailing for all citizens the stark reality, will be a match that helps ignite the demand for real change.

Thank you for your attention,



Susan Budinger

The Rodel Foundations

Introduction

Arizona is a young, vibrant and diverse state with great potential. We enjoy a spirit of optimism, a beautiful physical environment and a dynamic population. More than most states — indeed more than most nations — Arizona is poised to thrive in the fast-paced 21st century. But to get there, we will need an education system that accomplishes what no other state has done: ensures that all of our children and youth succeed in school and are prepared to succeed in life.

Arizona's opportunities

We began the development of this report by talking with state and local education leaders, and we were quickly drawn to their stirring vision for Arizona's future. Over and over, we heard a shared belief that our state's opportunities are substantial and that the quality of our public schools will shape our destiny. Our contribution to that vision is to clarify where our education system stands today compared to other states and to other nations.

When we consider how fundamentally the world has changed in the past decade, we see that changes are driven largely by advances in knowledge and technology. Google brings the world's storehouse of knowledge to anyone with access to the Internet. Ebay has transformed how people buy and sell goods. E-mail, Blackberries, instant messaging, iPods and Web portals, such as MySpace and YouTube, change how we work, play and stay in touch. Surgeries that used to take hours to perform and weeks to recover from are now routine outpatient treatments. Organ and limb transplants have become common. The Human Genome Project holds the promise of finding cures for everything from AIDS to the common cold. And more than 345,000 hybrid cars will be sold this year, signaling a huge shift in environmental awareness.

Arizona's leaders envision a high-wage economy built on innovation, science and technology, especially in the life sciences, aerospace, pharmaceuticals, nanotechnologies, optics, telecommunications and software development. Such an economy will be built on brainpower and creativity, not natural resources. *New York Times* columnist Thomas Friedman has written compellingly about the new "flat world," where global communications technologies make it possible for virtually anyone to compete from anywhere, putting a premium on knowledge, skills, flexibility, creativity and entrepreneurial problem-solving.

About This Report

How well are Arizona's schools preparing students to succeed in a society that will be more complex, diverse and globally competitive?

How do we compare to our neighbor states, to national averages and, of increasing importance, to other countries?

What are the key education system components with the most impact on student learning, and how do we compare on indicators ranging from the quality of our standards to the effectiveness of our finance system?

Given our strengths and weaknesses, what are the highest priorities for action? What changes do we recommend?

This report seeks to answer these questions. For organizations like ours and for the state as a whole, we offer an objective appraisal to help inform and guide our future education investments.

Our approach was to gather the most salient and credible data and analyses compiled by other organizations (see "Going forward," page 10) rather than to conduct original research. We did not find all the answers to our questions. Indeed, in several areas good data do not exist. In every area, the data we have raise important questions that we believe deserve a statewide conversation — a conversation we hope this report can help stimulate.

Our assessment is divided into two primary sections:

Student performance, which profiles our student demographics and focuses on common national and state-specific measures for elementary, middle and high schools.

System indicators, which examine five areas that have a significant impact on student performance:

- Standards and accountability — how well the systems involved in the education process reflect high standards and are aligned from preschool through post-secondary education;
- Teaching quality — the preparation, training, placement and pay of our teachers;
- Leadership — our governance structures, and the preparation, training, placement and pay of our principals, superintendents and other administrators;
- School choice — the availability and quality of school choices, such as charters; and
- Finance — an effective and efficient system for financing our schools.

These performance and system indicators share several criteria: (a) The performance indicators matter to students, schools, districts or states, and many are measures required by law; (b) the system indicators are those with a demonstrated impact on student learning and are largely shaped by state policy; (c) analyses come from credible and publicly available sources; and (d) data can be compared over time, across states or internationally.

We could have added much on postsecondary education, parent and student engagement, or such disciplines as the arts and career and technical education. There is much more to say about the education of Native American students, the challenges of teaching and learning on an international border, and the impressive dedication and skills of so many Arizona teachers, principals and students. And there is more to be said about our school governance and management structures at the state, county and local levels. In the long run, our focus on state policy, ongoing work being done by others and a desire to keep this report as concise as possible helped us decide what to include and what, reluctantly, to leave on the cutting room floor.

We conclude with recommendations, which offer our suggested policy changes in the areas that are the focus of this report. Arizona's great potential can be realized if we expect more of our students, our schools and our state. To reach that potential, we will need to shatter stereotypes that suggest some children can't learn at high levels. We will need to be among the first states to close the gap between children in higher- and lower-income families. We will need to work together across political and regional divisions toward a system that has higher standards and accountability, employs the best teachers in the world, offers quality school choices for every student, features exceptional leadership and governance, and is supported by an effective, efficient system of financing. The challenges are great, but the benefits of raising Arizona to be the best education system in the world are far greater.

In this new flat world, Arizona has three choices. First and best, we can educate our own students to fill the increasingly high-skill jobs that the state hopes to attract and keep. Second, we can import managers and employees with the skills and know-how to fill these jobs, but this approach places heavy strains on our civic life and systems, including water supply, transportation systems, housing stock and environment. Or third and worst, we can watch Arizona employers with the best jobs leave the state in search of talent elsewhere.

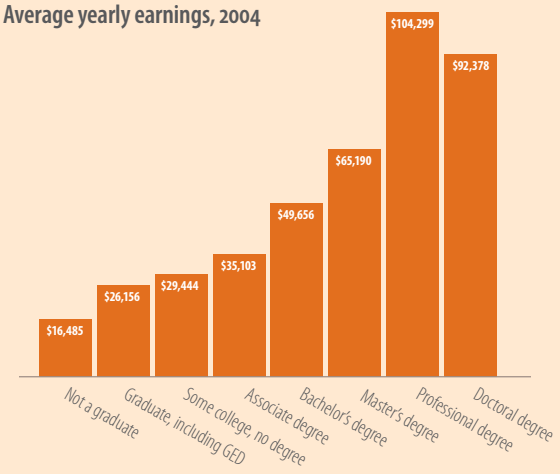
The individual and community benefits of education

For the individual, education pays. On average, high school graduates earn $9,671 more per year than dropouts, while college graduates earn more than twice as much. (See charts below.) That's more than three-quarters of a million dollars more for the college graduate over the course of his or her working life.

Education provides more than just additional income. Well-educated individuals have significantly broader career opportunities and better jobs that come with greater levels of responsibility. Society as a whole benefits when employers have access to well-educated workers who can handle the challenging jobs of the future — jobs that contribute to the state's overall economic health. A recent study by Teachers College at Columbia University estimated that, after the costs of intervention (e.g., preschool, reducing class size, teacher salary increase, etc.), society would save up to $127,000 for each new high school graduate through a combination of additional taxes paid; reduced Medicare and Medicaid costs; reduced crime costs; and cuts in welfare, housing assistance and food stamp payments.[1]

College graduates earn an average $23,500 more per year than high school graduates

Average yearly earnings, 2004



Source: *U.S. Census Bureau, Current Population Survey, 2005 Annual Social and Economic Supplement, October 2006*

The benefits of graduating from high school are large

The average lifetime dollar savings per expected high school graduate of ...

... additional taxes paid:	**$139,100**
... public health savings (through reduction in Medicare and Medicaid costs):	**$40,500**
... crime-related cost reduction:	**$26,600**

The decreased probability per expected high school graduate of ...

... receiving Temporary Assistance for Needy Families (TANF):	**40%**
... receiving food stamps:	**19%**
... receiving housing assistance:	**1%**

Source: The Costs and Benefits of an Excellent Education for All of America's Children, *Teachers College, Columbia University, January 2007*

The advantages extend beyond the economic bottom line. We all benefit from having neighbors who can support their families and who are actively engaged in the civic life of their communities — as voters, volunteers, coaches, tutors, mentors and good neighbors.

A high school degree alone is no longer sufficient to ensure a middle-class life. Nationally, more than two-thirds of new jobs will require some level of postsecondary education — college, technical prep, apprenticeships or military training. In Arizona, as the table underscores, about 85 percent of *high-growth, high-wage jobs* between now and 2013 will require at least a two-year college degree, according to a recent report to Governor Janet Napolitano's P–20 Council.[2] These are the kinds of jobs the state wants to create and retain — the kinds of jobs that pay wages that are high enough to sustain a vibrant middle class. Fewer than 2 percent of these jobs will be open to applicants who do not have at least a high school diploma.

The majority of Arizona's best jobs will require some college

New high-growth, high-wage jobs, 2007–13

Education/training requirements	Projected number of jobs	Projected percentage of jobs
May require a high school diploma or GED	1,748	1.6%
Requires a high school diploma; may require vocational training or AA/BA degree; some work-related skill or experience helpful	38,140	14.2%
Most require vocational school, job experience or AA degree; some require BA degree; previous work-related knowledge or experience required	109,820	40%
Most require four-year BA degree; two to four years of work-related knowledge or experience required	89,812	33.1%
Requires a BA degree; may require grad school; extensive work-related knowledge and experience required (5+ years)	30,698	11%
Total	**270,218**	**100%**

Note: *Percentages may not total 100 due to rounding.*
Source: From Education to Work: Is Arizona Prepared? *Public Works*

There is growing recognition, at least among business, education and political leaders, that the skills and knowledge needed for college and work in the 21st century are one and the same.[3] That is, students — even those who do not plan to go to college immediately — ought to take the kind of college-preparatory high school curriculum that used to be available only to the top tier of students. Thirty years ago, more than half of American manufacturing workers did not even have a high school diploma; now, the National Association of Manufacturers reports that nearly 40 percent of manufacturing jobs will require some higher education or training by 2012.[4]

Arizona's challenges

Compare these new economic realities with Arizona's educational reality. While most good new jobs will require some education beyond high school, only 7 in 10 Arizona 9th-graders earn a diploma, fewer than 4 in 10 enroll in college and fewer than 2 in 10 finish college in six years.[5] (See pipeline chart below.) On too many academic measures, we are in the bottom tier of states. For example, Arizona is 43rd in 8th grade reading,[6] 37th in math[7] and 49th in science,[8] according to the National Assessment of Educational Progress (NAEP), which is widely considered the most respected national benchmark of student learning. In each of these subjects, only about one in four Arizona students meets NAEP's recognized standards for achievement.

As in other states, some groups of Arizona's students fare less well than others. While there are exceptions, on average white and Asian students score anywhere from 20 to 40 percentage points higher than their African-American, Hispanic and Native American peers on the NAEP tests.[9] Race and class remain potent predictors of success, and our success as a state requires that we close these achievement and opportunity gaps.

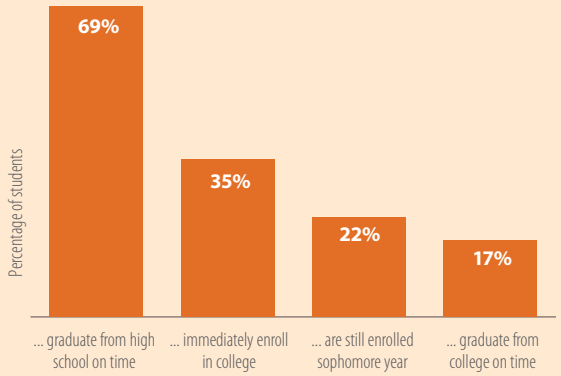
Arizonans increasingly are competing not just with students from California to Connecticut but with their peers from around the world. And there are troubling signs that America is falling behind — not because our scores have dropped, but because other nations are doing a better job. We used to rank first among industrialized nations in high school graduation; we now rank 16th. In the most recent international tests, American 8th-graders ranked 17th in reading, 26th in math and 20th in science among industrialized countries.[10]

A recent study comparing state and international academic standards found that Arizona ranked 13th in grade 8 math and 21st in science, behind such countries as Estonia and Malaysia.[11] (See "How Arizona compares to the world," next page.)

These findings do not bode well for students who will be competing for good jobs against students from countries around the globe. As Thomas Friedman has written: "Economic competition in the flat world will be more equal and more intense. We Americans will have to work harder, run faster and become smarter to make sure we get our share."[12]

Only 17 percent of Arizona's 9th-graders graduate from college on time

Of every 100 Arizona 9th-graders, the percentage who ...



Source: *The National Center for Higher Education Management Systems Information Center for State Higher Education Policy and Analysis, 2003–04*

How Arizona compares to the world

Projecting 2005 NAEP achievement (percentage proficient and above) onto 2003 Trends in International Mathematics and Science Study data for participating countries, in descending order of proficiency

8th grade math

% proficient & above	Rank	% proficient & above	Rank *(continued)*
73	1. Singapore	18	24. Romania
66	2. Hong Kong, SAR	18	24. Armenia
65	3. Korea, Republic of	17	26. Italy
61	4. Chinese Taipei	17	26. Bulgaria
57	5. Japan	12	28. Moldova
40	6. Belgium (Flemish)	11	29. Cyprus
38	7. Netherlands	9	30. Norway
37	8. Hungary	8	31. Macedonia
36	9. Estonia	7	32. Jordan
28	10. Slovak Republic	5	33. Egypt
27	11. Australia	5	33. Indonesia
27	11. Russian Federation	4	35. Palestinian Nat'l Auth.
26	13. Malaysia	3	36. Lebanon
26	13. **United States**	2	37. Iran
26	**Arizona**	2	37. Chile
25	15. Latvia	2	37. Bahrain
24	16. Lithuania	2	37. Philippines
24	16. Israel	1	41. Tunisia
22	18. England	1	41. Morocco
22	18. Scotland	0	42. Botswana
21	20. New Zealand	0	42. Saudi Arabia
21	20. Sweden	0	42. Ghana
19	22. Serbia	0	42. South Africa
19	22. Slovenia		

8th grade science

% proficient & above	Rank	% proficient & above	Rank *(continued)*
55	1. Singapore	17	23. Italy
52	2. Chinese Taipei	15	25. Jordan
45	3. Korea	15	25. Norway
44	4. Hong Kong, SAR	14	27. Romania
42	5. Japan	12	28. Serbia
41	6. Estonia	10	29. Macedonia
38	7. England	10	29. Moldova
38	7. Hungary	10	29. Armenia
31	9. **United States**	8	32. Egypt
31	9. Netherlands	8	32. Palestinian Nat'l Auth.
30	11. Australia	6	34. Iran
28	12. Sweden	6	34. Cyprus
26	13. New Zealand	4	36. Bahrain
26	13. Slovak Republic	3	37. Chile
25	15. Lithuania	3	37. Indonesia
24	16. Slovenia	3	37. Philippines
24	16. Russian Federation	3	37. Lebanon
24	16. Scotland	1	41. Saudi Arabia
22	19. Belgium	1	41. Botswana
21	20. Latvia	1	41. South Africa
20	21. Malaysia	1	41. Morocco
20	**Arizona**	0	45. Ghana
18	22. Israel	0	45. Tunisia
17	23. Bulgaria		

Source: *Gary W. Phillips,* Expressing International Educational Achievement in Terms of U.S. Performance Standards: Linking NAEP Achievement Levels to TIMSS, *American Institutes for Research: Washington, DC, 2007. Arizona 2005 NAEP results added from NAEP Data Explorer, accessed August 2, 2007, at http://nces.ed.gov/nationsreportcard/nde/.*

We can do better

Our demographic challenges are evident: rapid growth, a large proportion of low-income students along with a sizeable population of non-English-speaking students, and high levels of mobility. Historically, these students have tended to lag in academic achievement. To raise Arizona's overall performance levels, we will need to meet the challenges created by this historical trend and ensure that all students receive a quality education, regardless of their backgrounds.

Just as significant, Arizona compares unfavorably on most system indicators that explain the conditions under which our children, especially low-income children, are being taught: inadequate early childhood learning opportunities; difficult conditions for teaching and leadership, especially in certain locales; academic standards that fall short of what business and university leaders say are required for success; and a funding system that spends less per student than 47 other states. Arizona compares favorably to other states in "choice" (educational options available to students), but there still is room for improvement of the quality of those choices.

Promising progress

The good news is that we can fix these system conditions, and there are promising signs that we are starting to do so. Many Arizona political, education and business leaders have made improved education and child services a high priority. While the state is committed to winning a larger share of the fast-growing, high-paying jobs in high-technology industries like biosciences, many have pointed out that we cannot attract and keep such jobs without a strong public education system, capable of preparing the workforce to undertake these new challenges.

Moreover, many positive initiatives are under way, notably the Governor's P–20 Council, which intends to better align our preschool, K–12 and postsecondary education systems and raise the requirements for student success. New programs will expand quality student choices through dual enrollment and other options. And passage of Proposition 203, First Things First, provides funding for quality early childhood education and will increase the chances that our youngest children will be prepared for elementary school. The "Progress" sections of the following chapters discuss these and other efforts in more detail. They offer important signs of hope, progress and momentum.

Going forward

The challenges are hardly new; they are well-documented by a series of studies by the Morrison Institute for Public Policy, the Rodel Foundation of Arizona, the Goldwater Institute and the Center for the Future of Arizona. Public attention to the challenges, recommendations for change and the emergence of such active public partners as the Arizona Business Education Coalition, Greater Phoenix Leadership, Southern Arizona Leadership Council and Flagstaff 40 suggest that it is possible to shape a real public agenda around school reform.

Beating the odds

Equally promising are the many schools that already are beating the odds — educating low-income and minority students to high levels of achievement, despite the kinds of impediments that we describe in our analysis of system conditions. Schools with high proportions of Hispanic students, such as Magnet Traditional in Phoenix, Gallego Basic in Tucson and Fairbanks in Morenci, are getting consistently high 3rd grade reading scores, while middle schools from Granada East in Phoenix to Wade Carpenter in Nogales are showing consistent gains in 8th grade math. At the high school level, Tucson's BASIS Charter is the nation's top-ranked charter and sixth-ranked high school overall, according to *Newsweek's* Top 1,200 High Schools in the U.S. If schools like these can succeed, there is no reason that many others cannot do so as well.

We find inspiring success stories not just within our own borders but all across the country and around the world. Entire nations, such as England, Ireland and Singapore, have redesigned their school systems from top to bottom and are now some of the highest-performing countries in the world. If they can do it, we can, too.

Our unique advantages

Finally, Arizona has many advantages that other states and nations only dream about. We benefit from a fast-growing economy that is creating jobs and attracting several hundred thousand newcomers to the state every year; while other states are closing schools and shutting factories, we are opening them. Other states and nations are just beginning to confront the demographic, social and cultural challenges that are commonplace to us; we have an important head start in grappling with the new realities of an increasingly diverse and complex world. As a nation, we are facing the biggest economic and demographic shifts in our history, and we Arizonans are in the forefront of this transformation; thankfully, our pioneering legacy should serve us well going forward.

Step one is to be clear about where we are ... and to recognize what it will take to prepare all children for a future of excellent choices and opportunities.

Who Are Our Students?

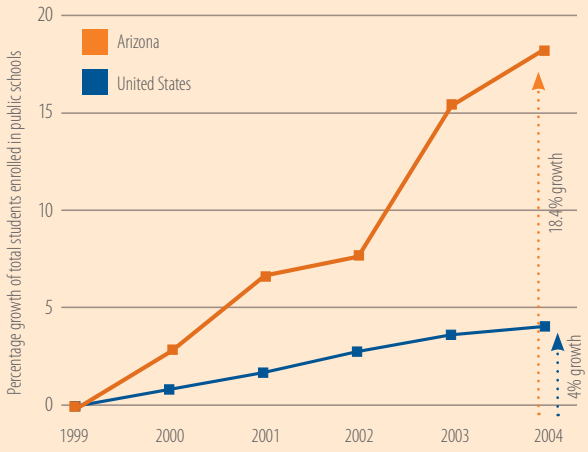
Arizona's schools are affected by the state's changing demographics, including (1) rapid population growth, (2) increased student diversity, (3) high levels of poverty, (4) high concentrations of English language learners, (5) high mobility and (6) growing demand for quality early childhood education programs. In addition, many newcomers fall into multiple categories of students who traditionally have been underserved by the public schools: low-income, non-English-speaking and ethnic minority.

We are growing rapidly

While the U.S. population has grown by 5.3 percent since 2000, Arizona's has grown by three times as much (15.8 percent) since then, and during the 1990s, our growth was close to 40 percent.[1] As the fastest-growing state in the nation, our 2010 population is projected at 6.2 million.[2] Our public school enrollment also is growing fast, up 18.4 percent since 1999 to nearly 1 million students in 2005.[3]

Rapid public school enrollment growth in Arizona

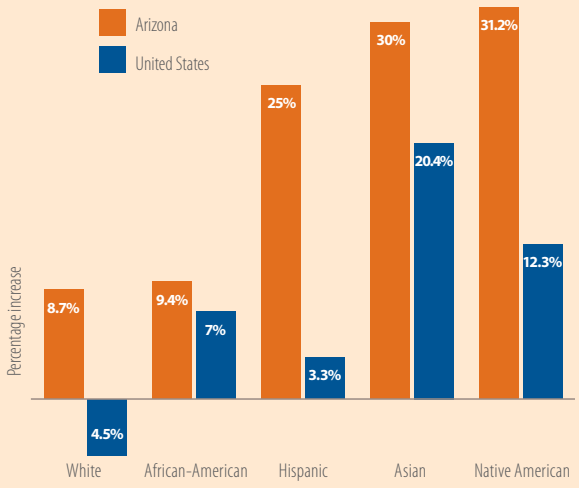
Enrollment growth in the United States and Arizona, 1999–2004



Source: *National Center for Education Statistics*

Arizona's student population is growing much faster than the national average

Enrollment growth rates by ethnicity, 1999–2004

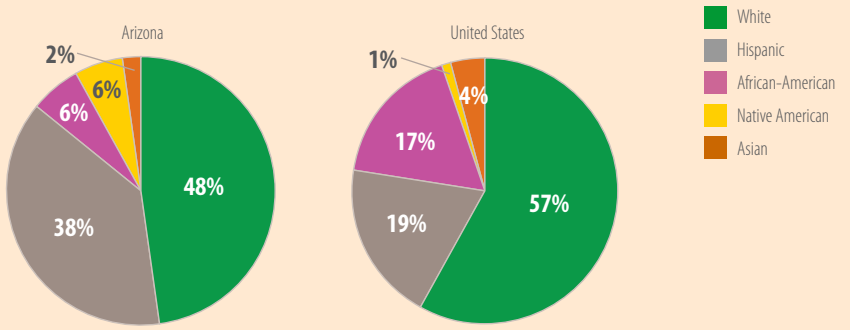


Source: *National Center for Education Statistics*

We are increasingly diverse

Our public school students are predominantly white (48 percent) and Hispanic (38 percent).[4] We are home to 20 Native American tribes, many living in isolated areas with limited income opportunities, which puts many below the poverty line.

White students are no longer the majority in Arizona



Note: *Percentages may not total 100 due to rounding.*

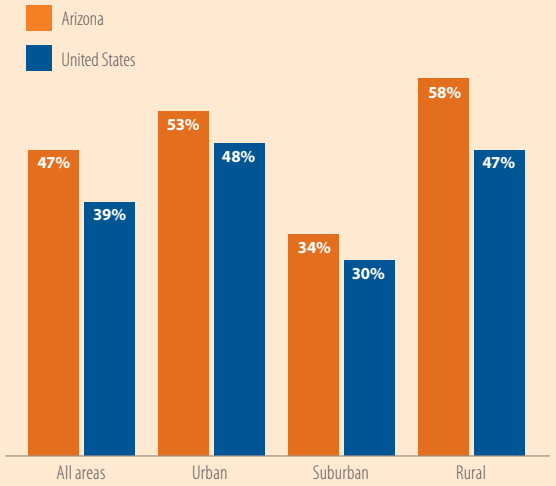
Source: *U.S. Census, 2004*

Our families and children are poorer

In 2005, 25 percent of Arizona children age 0–5 lived in poverty (roughly $20,000 annual income for a family of four — two adults, two children), and child poverty in the state is growing.[5] On average, we have more families living in poverty (19 percent compared to 15 percent nationally) and more children living in low-income families with a household income of less than $34,340 (43 percent compared to 36 percent nationally).[6]

More than half of our children living in urban and rural areas (53 percent and 58 percent, respectively) and one-third of the children living in Arizona suburbs come from low-income families. In each case, the percentage exceeds the national average.[7]

Percentage of children in low-income families by residential area



Source: *National Assessment of Educational Progress*

Many of our students do not speak English

Arizona schools served nearly 145,000 English language learners (ELL) in the 2003–04 school year.[8] This represents tremendous growth, a 52 percent increase in the ELL population since 1993–94. But as the table at right shows, other states in our region are experiencing similar demographic shifts in their public schools.

States ranked by the number of enrolled English language learner students in 2003–04

	ELL enrollment 2003–04	Percentage change from 1993–94
50 states & DC	4,317,002	51.6
1. California	1,598,535	31.5
2. Texas	660,707	56.3
6. Arizona	144,145	51.7
7. Colorado	91,751	250.2

Source: *"States Ranked by the Number of Enrolled ELL Students in the 2003–2004 School Year,"* Migration Information Source, *National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs*

The Arizona Department of Education (ADE) reports that 28 percent of Arizona students in public schools do not speak English as their first language. This compares to a national average of 11 percent. A report from the Arizona Center for Public Policy suggests that ELL students in Arizona are "nearly the poorest performing, second only to special education students" and that these students on average will have higher mobility rates than their peers who are fluent in English.[9] It is much more challenging for schools to educate ELL students to high standards, given their limited English skills. Also, in many school communities, language barriers tend to limit the level of parent involvement.

Our population is highly mobile

Arizona has the fourth highest mobility rate (determined by the number of people flowing in and out of the state) in the country, with 186,151 coming in and 92,452 leaving between 2000 and 2004, mostly to and from California.[10]

Newcomers include foreign immigrants and baby boomers looking for job opportunities, along with young elderly who have flocked to Arizona to retire. Our younger newcomers tend to be poorer. Among the children who moved to Arizona in the past three years, an estimated 60 percent were from low-income families, which is slightly higher than the national average of 57 percent.[11]

Our children are much more likely than those in other states to have moved during the past year. Among children under the age of 18 in Arizona, 23.5 percent have moved, compared to 16 percent in the United States.[12]

High student mobility poses several challenges: Teachers do not get to know their students and families; students are less likely to receive consistent, aligned instruction from school to school; and school districts have a harder time monitoring student progress and sharing that information with teachers and families.[13]

Challenges in educating our youngest children

Recent research makes a compelling case that quality early learning experiences from birth through age 5 are essential building blocks for future learning.[14] Arizona's newborns face greater challenges than those in other states; we have more teen births, unmarried mothers and mothers with fewer than 12 years of schooling themselves.[15] (See "Starting on the wrong foot," page 23.) Children who are born into poverty, who struggle with physical maladies related to low birth weight or preterm birth, or who grow up with teenage mothers who were not successful in school on average will need more academic, social and emotional support than their more-advantaged peers.

Although the state has more than 12,500 child care, preschool and pre-kindergarten programs (from family care and church-sponsored programs to federally funded Head Start), there are not enough quality programs to meet the growing demand. In 2006, only 18 percent of licensed child care facilities were accredited by one of the accrediting organizations accepted by ADE.[16]

In 2006, Arizona voters approved Proposition 203, which provided additional funding and a statewide board to oversee early care, education and health. Meanwhile, since 2003, the Arizona Early Education Funds have been supporting regional partnerships to strengthen early care and education at the local level. Specifically, local programs are supporting implementation of Governor Napolitano's 10-point School Readiness Action Plan, which focuses on improvements in such areas as family support, health screenings, child care and early education, including full-day kindergarten.

Milestones

Fortunately, Arizona isn't starting from scratch. Since 1990, the state has taken steps to address all five key indicators.

	1990–99	2000–04	2005–07
Standards and Accountability	1996–97: Arizona begins development of the first state standards; health, foreign language and workplace skills standards still in use.	2000–06: Arizona Department of Education (ADE) convenes educator panels to develop grade-level standards in core subjects. 2002–03: Legislature creates the state accountability system, AZ LEARNS.	2006: Arizona joins 28 other states in the American Diploma Project Network. 2007: U.S. approves Arizona as one of eight states permitted to use a student academic growth model for No Child Left Behind compliance. 2007: ADE awarded $6 million federal grant to accelerate efforts to combine state data in one place, including IDEAL system (below).
Teaching Quality	1990: Legislature gives Career Ladder Program, started in 1984, "permanent" legislative status as a result of increased student achievement in Career Ladder districts.	2000: Voters approve Proposition 301, in which qualified teachers are earning about $2,500 more a year, based on performance. 2003: Three-year federal grant funds the Arizona Teacher's Excellence Plan.	2005: The Governor's Committee on Teacher Quality and Support is established by Executive Order No. 2005-11. 2007: ADE launches the Integrated Data to Enhance Arizona's Learning (IDEAL) Web site to provide educators with student data and other information, including professional development resources.
Leadership and Governance	1999: School Facilities Board created.	2004: Wallace Foundation gives Arizona $1.2 million per year for the State Action for Educational Leadership II Program to nurture state, district and school leaders.	2005: The Governor's P–20 Council is established by Executive Order No. 2005-19. 2005–06: Wallace renews grant for the second and third years. 2006: Voters approve Proposition 203 to provide additional funding and statewide board to oversee early care, education and health. 2006: Arizona School District Redistricting Commission formed to recommend merging elementary and high school districts.
School Choice	1994: Legislature passes charter school law. 1997: Governor Fife Symington signs bill allowing residents to receive a tax credit for donations to charitable organizations that give scholarships to children to attend private or religious schools.	2003: Legislature amends charter school law.	2007: Arizona ranked as having fourth strongest charter law in nation, based on such factors as number and type of schools and level of autonomy.
Public School Finance	1992: *Flores v. Arizona* case begins, alleging that English language learners (ELL) are being shortchanged. 1994–98: Court rules that school facilities are unequal, and the state establishes School Facilities Board to equalize construction funding.	2000: Rodel Foundation created. 2000: Voters approve Proposition 301, a 0.6 cent sales tax increase for school improvement.	2006: Arizona increases funding for full-day kindergarten by $118 million for 2006–07 and another $80 million for 2007–08. Business community makes major philanthropic investments, and philanthropies focused on education reform (Helios Education Foundation, Ellis Center for Educational Excellence) are created.

Arizona's Student Performance and System Conditions at a Glance

Student Performance

Elementary School — Reading	Based on the National Assessment of Educational Progress (NAEP), 24 percent of our 4th-graders are "proficient" in reading, which is in the bottom tier of states (46th). Although grade 4 Arizona Instrument to Measure Standards (AIMS) scores have moved in the right direction, only 67 percent of students meet or exceed reading standards, and our minority and English language learners (ELL) remain 20 to 30 percentage points behind the state averages. Nearly 6 in 10 low-income students are "below basic" on NAEP.	
Elementary School — Math	Thirty-one percent of our 4th grade students are "proficient" on the NAEP math test, placing us 43rd nationally. More than three quarters of our 4th-graders — 76 percent — meet or exceed standards based on the AIMS tests. Again, gaps among student groups are large on both tests. On NAEP, 4 in 10 low-income students score "below basic."	
Middle School — Reading	Twenty-four percent of our 8th-graders are "proficient" in reading on NAEP (42nd nationally). On the grade 8 AIMS reading tests, 65 percent of all students meet state standards. As in elementary school, gaps among student groups often exceed 20 percentage points. Half or more of Hispanic, Native American and low-income students score "below basic" on the NAEP. More than 8 in 10 ELL students score "below basic."	
Middle School — Math	Although 26 percent of our students are "proficient" on the NAEP math test in grade 8 (38th nationally), our students are closer to the national average (31 percent proficient) than in any other grade and subject. On the AIMS grade 8 math test, 62 percent of students meet state standards. As in other grades and subjects, gaps are large.	
High School	Only about 7 in 10 of Arizona's students graduate from high school in four years, and disproportionately fewer minority students do so, which is about average among U.S. states. Only 60–70 percent initially pass the AIMS tests required to graduate. Fewer than half of graduates are eligible for college admission, only about one-third go on to college, and high percentages of college freshmen must enroll in low-level courses — all similar to national averages. Although scores on college entrance and Advanced Placement tests are comparatively high, participation is much lower than national averages.	

System Conditions

Standards and Accountability	High expectations are at the heart of a quality state education system. Generally, we receive high grades for our academic content standards, but graduation requirements are low and not aligned to college or work standards. Passing scores on the state tests were lowered in 2005, so our accountability system is based on student expectations that are not particularly high compared to other states' tests. Working toward a P–20 system has potential.	
Teaching Quality	To help students achieve high standards, carefully constructed curricula must be taught by highly effective teachers. The National Center on Teaching Quality gives Arizona an "unsatisfactory" grade overall, with a mix of Cs and Ds and an F for preparing special education teachers. Arizona has comparatively high percentages of teachers on waivers and teachers teaching out of their field. Shortages are particularly acute in urban and rural areas and on or near reservations. Teacher preparation programs could be more rigorous and better reflect our changing population's learning needs. Professional development is inadequately supported, and we have low salaries and many novice teachers.	
Leadership and Governance	Research also shows that teachers cannot do a highly effective job unless they work with strong leadership, which requires outstanding principals and administrators. We need a better understanding of Arizona's conditions for school leadership. Currently there are projects under way but no strategic statewide plan. Our governing structures are complex and could affect leaders' ability to create excellent schooling conditions.	*Inadequate state and national data*
School Choice	While the standards are constant, a one-size-fits-all approach won't work for all students or families, so multiple choices are necessary to spur innovation within the system. Our choices are plentiful; we are a national leader in the percentage of students attending charter schools. However, there are persistent concerns about program quality and the adequacy of program oversight.	
Public School Finance	Funding — as long as it is spent efficiently — is critical to attracting and retaining great teachers and leaders, offering sufficient choices and providing the multiple instructional supports students need to reach the standards. Only two states spend less annually per pupil on school operations than Arizona — about $2,500 less than the national average.	

The color of the circle describes Arizona's current performance, compared to other states.

- Arizona is among the top 10 states.
- Arizona is among the middle 30 states.
- Arizona is among the bottom 10 states.

Note: Starting here and throughout this report, the green, yellow and red rank the states' performance on various indicators. Exceptions occur for ties when more than one state has identical performance on the particular indicator.

Student Performance

How Arizona Measures Performance

To understand how well Arizona's students perform, one first needs to understand the state's complex, multifaceted system of standards, assessments and accountability.

The state's academic content standards describe what each student should know and be able to do at various grade levels in nine subjects, from reading to the arts. Various tests measure how well students master the standards, and each test comes with its own performance standards (sometimes called "cut scores"), which describe how well a student needs to do in order to meet the standard or be considered "proficient."

The best way to compare performance across states is the **National Assessment of Educational Progress (NAEP)**, an objective measure of reading, math and science performance based on a sample of 4th and 8th grade students in each state. It widely is considered to be the "gold standard" among the nation's assessments. The samples are carefully constructed to mirror the demographic diversity of each state, taking into account racial and ethnic factors as well as urban, rural and economic criteria. And the samples are sufficiently large to allow confidence in the results. Since passage of the federal No Child Left Behind (NCLB) law in 2001, all states are required to give the NAEP reading and math tests every two years in grades 4 and 8 as a benchmark to compare performance across states. NAEP proficiency standards are high, which is why, in part, NAEP results are increasingly used to compare states. They give us the only detailed and public data on how all states stack up against a common high standard.

Second, the state's own **Arizona's Instrument to Measure Standards (AIMS)** test measures performance in reading, math and writing in grades 3–8 and, starting in 2008, science in grades 4, 8 and 10. High school students must pass the AIMS test (which covers reading, math and writing) to graduate and can start taking the test as 10th-graders. AIMS is designed specifically to measure achievement against the state's own academic standards.

Third, Arizona students take the **Terra Nova**, a norm-referenced, standardized test used to compare our students' performance to a sample of U.S. students in reading, language arts and math. Versions of the test are given to students in a handful of states (at least 11) and in individual districts across the country. In Arizona, the full Terra Nova test is given to students in grades 2 and 9; a smaller pool of questions taken from the Terra Nova is added to the AIMS-Dual Purpose Assessment in grades 3–8. Unlike NAEP and AIMS, which report the percentages of students who meet a standard, Terra Nova reports how Arizona students compare to the average performance of a nationally representative sample of students who took the tests in 2000.

The accountability system, which includes both state and federal indicators, measures the annual performance of schools and school districts. The federal NCLB scorecard focuses on the extent to which schools and districts make "adequate yearly progress" (AYP) in reading, math, student attendance and graduation — both overall and for specific student groups (ethnic/racial, low-income, students with disabilities and English language learners). The state's own scorecard (AZ LEARNS) takes into account AIMS test scores, year-to-year student gains on the AIMS tests or the graduation rate, and the federal NCLB rating.

The system is complex, confusing and, at times, contradictory. One can have challenging and clear content standards, but if the tests are not well-aligned to those standards, or the passing scores are set too low, the overall impact is to dilute the value of the test results to accurately measure what students actually know. Moreover, a school can do very well according to the state's accountability measures but fail according to NCLB's. This problem, however, is not unique to Arizona.

The best assessment of our school systems' performance is achieved from sources outside the K–12 system. For those students who choose to go to college, are they adequately prepared to do freshman-level academic work? For those who go directly into the workforce, can they perform at levels acceptable to their employers? Although information is available to measure college performance, similar data do not exist for those entering the workforce. Because there are few or no publicly available or common tests administered by employers, their views on these issues are anecdotal and not very quantifiable.

Early Childhood

The demographic trends noted previously are even more evident for our youngest children: We have one of the youngest populations in the nation — with nearly half a million children (459,772) age 5 and under — and we will have close to 800,000 youngsters by 2020.[1] Hispanics are the fastest-growing ethnic group in Arizona's birth-to-5 age group[2] and make up 40 percent of the state's population in that age group.[3]

"Those most at risk will make the greatest gains from early childhood programs [and conversely the social costs will be the highest for a failure to intervene on their behalf]."

Ellen Galinsky, Family and Work Institute, 2004

Twenty-one percent of Arizona children ages 0–5 are born into poverty (compared with 18 percent nationally) and child poverty in the state is growing (it was below 20 percent in 1999).[4] Unlike other states where poverty is typically most concentrated in urban settings, isolated rural poverty also is common in Arizona, and access to services in those areas is more limited.

Arizona newborns face greater challenges than those in other states. Compared to the rest of the country, we have more teen births, unmarried moms and moms with fewer than 12 years of schooling themselves. These conditions increase the importance of early care and education for our state because children who are born into poverty, who struggle with physical maladies related to low birth weight or preterm birth, or who grow up with mothers who gave birth while they were teenagers or were not successful at school will on average need more academic, social and emotional help than their more advantaged peers.[5]

Starting on the wrong foot

Indicator	U.S. average	Arizona	
		percentage	rank
Teen births	10.3%	12.7%	41st
Teen births (2+)*	19.8%	22.1%	47th
Unmarried mom	35.8%	42.2%	45th
Mom has <12 yrs schooling	22.2%	30.3%	40th
Late or no prenatal care	3.6%	7.5%	40th
Mom smoked	10.2%	5.9%	2nd
Low birth weight	8.1%	7.2%	16th
Preterm birth	12.5%	13.3%	38th

**Percentage of teen births to women who were already mothers.*
Source: *Annie E. Casey Foundation,* Kids Count, *2004*

The ACF and Ellis Center ask readers to read the companion report, which describes Arizona's early care and education environment in greater detail and compares it with other states and nations.

School readiness

The good news is that no matter what the family conditions, all children are born learners. The past 15 years of research tell us what good caregivers and most families know intuitively: Children naturally thrive on learning, and their brains develop most rapidly in the first three years. This flexibility in the developing brain emphasizes the importance of nurturing relationships, guidance and stimulation. When infants and toddlers develop the building blocks for language and literacy skills and are given the chance to build on that foundation in high-quality early childhood settings, they will be ready for school.

Middle-income families provide advantages to their children in many ways that low-income and poorly educated parents do not. By 4 years of age, a typical child in a professional family will have been exposed to 45 million words compared to only 13 million words for a child in a low-income family.[6] Vocabulary is a preliteracy skill and foundation to later begin reading.

The environment for learning can support or hamper a young child's emotional, social and intellectual development. Even in a disadvantaged environment, a child born with normal intelligence who does not start out on a trajectory to develop to his or her potential can still catch up with quality early intervention.

Higher expectations

But at the same time, more is expected of all children at an earlier age. Many young children are expected to enter kindergarten able to count, recite the alphabet, and know colors and shapes. Teachers, under increasing pressure to improve their students' performance, expect preschool children to listen, follow directions and have other social skills that today's adults learned when they were in kindergarten. Emotional and social development are intertwined with academic learning, and all are needed for successful schooling.[7]

> "[S]ocial and emotional skills affect performance in school and in the workplace. We too often have a bias toward believing that only cognitive skills are of fundamental importance to success in life."
>
> James J. Heckman, Ph.D. Nobel Laureate, *Economic Sciences*, 2000[8]

To ask that children meet higher standards in school *without extra help* when they begin from such different starting points is unfair. The student achievement gaps that result from unequal opportunities are described later in this report, but they begin as school-readiness gaps.

High-quality early care and education

Child care and preschool in Arizona cover a wide variety of programs and funding streams.[9] Children often start with infant (and toddler) care programs, move to preschools when they are ages 3 and 4, and enter the K–12 system as kindergartners at age 5 or 6. Despite more than 12,500 programs available statewide, there are not enough programs to meet the demand. Early care and education includes family care (kith and kin) as well as full-day, part-day, 24-hour for-profit and nonprofit, public and private child care centers, preschools, Head Start, religious sponsored, and corporate-supported programs serving children ages birth to 5.

Despite the variety, Arizona's challenge for early care and education is to improve the quality, affordability and access of all types of care programs so all our children will be ready to succeed in school. The challenge is to elevate basic child care to age-appropriate offerings that stimulate brain development and provide quality learning experiences. Most families need all-day, year-round care for their children, not just a part-day, part-year program; so, quality child care and preschool are both necessities and sound investments, especially for children in poverty. They are a necessity because, according to the 2000 U.S. census, 60 percent of children in Arizona live with a single, working parent or with two parents who both work. And they are a sound investment because children who participate in high-quality child care and preschool programs will be able to compete in a level playing field.

Defining quality

An effective system of early care and education has been described as a three-legged stool resting firmly on quality, affordability and accessibility. The setting and details of care will vary, but research on three programs shown to be effective in delivering public and private benefits documented the following common features:

- An early start (from birth), with strong parental involvement;
- Well-educated, well-trained and well-compensated teachers — with resulting low staff turnover; and
- Small class sizes and high teacher-child ratios.

Beyond these basics, the programs also were intensive (lasted more than a year and/or transitioned into the early elementary years), had high levels of parent education and support, and had an emphasis on children's social, emotional and physical learning, not just academic achievement.[12]

Early learning is a prerequisite to progress in K–12 education

A 2003 study showed that the annual rates of return on public investments in a high-quality early education program for children in poverty save 12 percent in public and government costs later on, and an additional 4 percent of the investment is saved by the participants, adding up to societal cost savings of 16 percent.[10] Other studies indicate that children who receive high-quality early childhood programs are academically strong in school, are less likely to engage in criminal behavior and earn higher wages as adults than their nonparticipating peers. As these children mature, costs for remedial education, criminal justice and welfare benefits decline, yielding a significant long-term pay-off for taxpayers and governments.[11]

Elementary School

Elementary school is the entryway to the public school system. For those children who do not attend preschool, it is the first formal education to which they will be exposed. The basics that students learn in elementary school help determine their success in secondary education and later in college and careers — making it essential that we provide them with the best start possible.

Between 18 and 31 percent meet NAEP proficiency standards

In 2007, on the 4th grade NAEP exam, 24 percent of Arizona students met or exceeded proficiency in reading, and 31 percent did so in math. Reading scores were unchanged since 2005; math scores were up 3 points. On the 2005 test, 18 percent were proficient or above in science.[1]

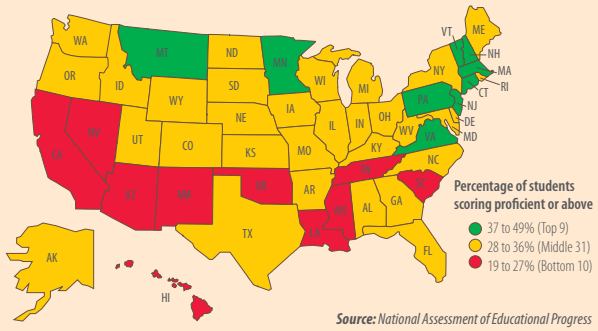
Results were different on the state AIMS test and Terra Nova test. On the AIMS reading test, 67 percent of our 4th-graders met or exceeded the standard, and 76 percent did so on the math test. On the Terra Nova, 4th grade students were between the 48th and 54th percentile in reading, math and language; the 50th percentile is the average.[2]

For all three tests, while there are youngsters in all racial and ethnic groups who perform well, on average the performance gaps between white and Asian students and African-American, Hispanic and Native American students are large, between 20 to 30 percentage points.

And low-income students' and English language learners' (ELL) performance is lower than average in all subjects.

Arizona is 46th nationally — NAEP grade 4 reading, 2007

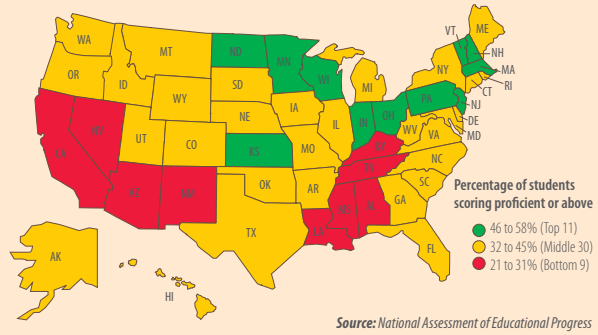
To reach the national average of 32 percent, Arizona needs to gain 8 percentage points. To reach the top performing states, Arizona would need to gain at least 13 points.



Source: *National Assessment of Educational Progress*

Arizona is 43rd nationally — NAEP grade 4 mathematics, 2007

To reach the national average of 39 percent, Arizona needs to gain 8 percentage points. To reach the top performing states, Arizona would need to gain at least 15 points.



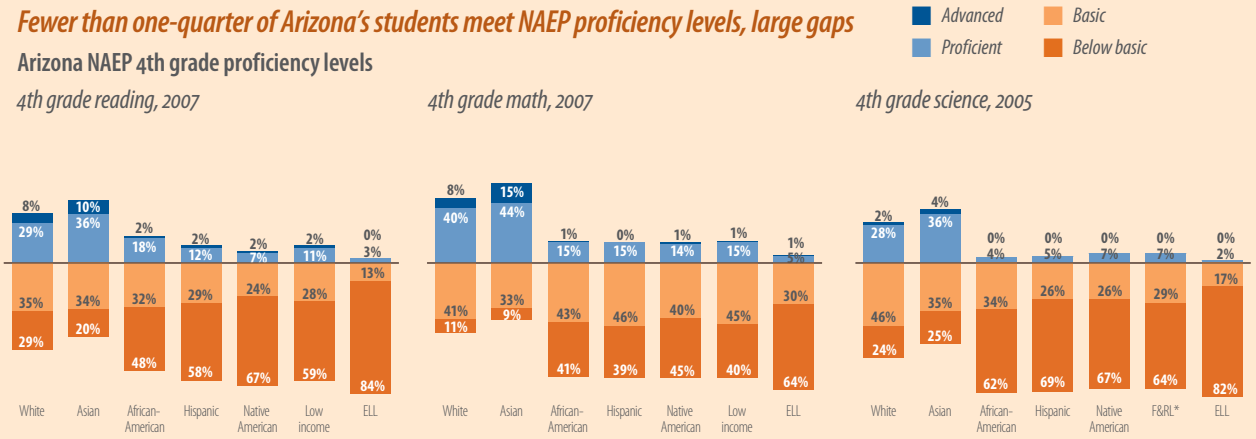
Source: *National Assessment of Educational Progress*

Voluntary full-day kindergarten is a priority

A quality kindergarten experience helps students succeed in elementary school. In 2004, 44 percent of Arizona's kindergarten students were in full-day programs.[3] Since 2004, under the leadership of Governor Napolitano, Arizona has moved to bolster public full-day kindergarten with significant funding increases. A $118 million increase was appropriated for 2006–07, with another $80 million for 2007–08 targeted toward children attending schools with more than 90 percent low-income students. *(To find out more about the importance of early child care and education, see our companion report.)*

Fewer than one-quarter of Arizona's students meet NAEP proficiency levels, large gaps

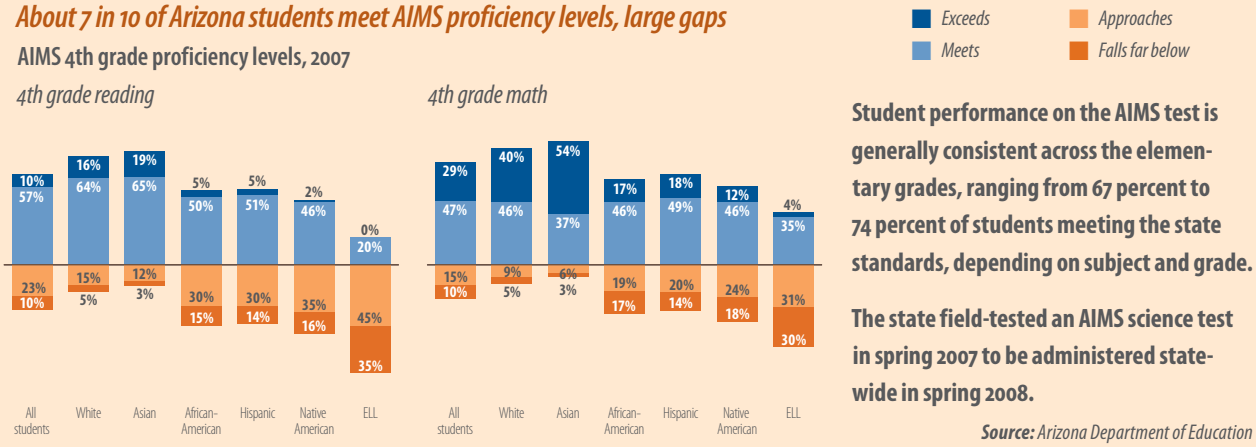
Arizona NAEP 4th grade proficiency levels



Source: *National Assessment of Educational Progress*

About 7 in 10 of Arizona students meet AIMS proficiency levels, large gaps

AIMS 4th grade proficiency levels, 2007



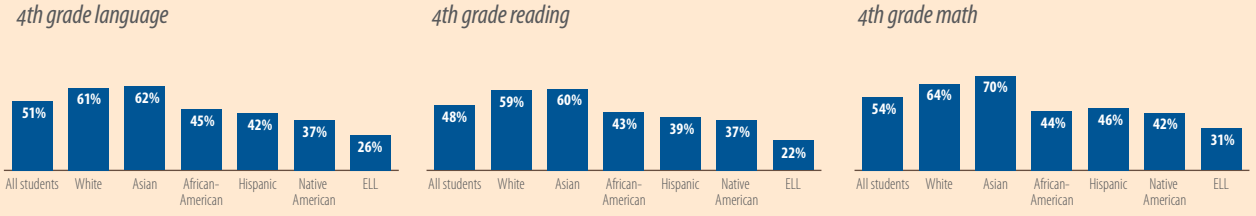
Student performance on the AIMS test is generally consistent across the elementary grades, ranging from 67 percent to 74 percent of students meeting the state standards, depending on subject and grade.

The state field-tested an AIMS science test in spring 2007 to be administered statewide in spring 2008.

Source: *Arizona Department of Education*

Students score between 48th and 54th percentile on Terra Nova, large gaps

Terra Nova percentile rankings, 2007



As on the AIMS test, student performance on the Terra Nova is consistent across the elementary grades. In grade 2, when the full Terra Nova is given (rather than the smaller pool of questions added to AIMS-DPA in the other grades), our students were in the 47th percentile in reading, and the 51st percentile in math, compared to the 48th and 54th percentiles in grade 4 reading and math.

Source: *Arizona Department of Education*

Middle School

During middle school, students work to master skills they learned in elementary school. In particular, their reading comprehension, research and writing skills should be improving. In math, they should be able to go beyond simple arithmetic and learn to apply higher-level mathematical skills. Research shows that students who have the opportunity to take Algebra 1 by 8th grade are more likely to be admitted to and succeed in college.[1]

Between 20 and 26 percent meet NAEP proficiency standards

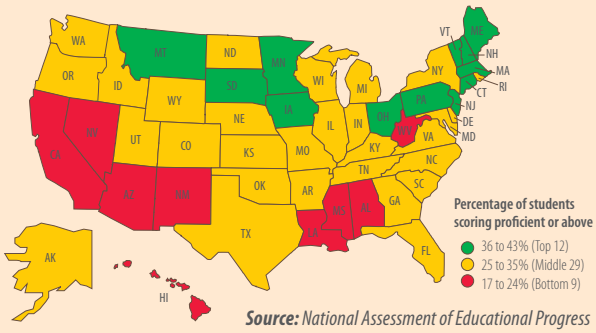
In 2007, on the 8th grade NAEP exam, 24 percent of Arizona students met or exceeded proficiency in reading, and 26 percent did so in math. Reading scores were up 1 point since 2005; math scores were unchanged. On the 2005 test, 20 percent were proficient or above in science.[2]

As in elementary school, results were different on the state AIMS test and Terra Nova test. On the AIMS reading test, 65 percent of our 8th-graders met or exceeded the state standard in 2007; 62 percent met or exceeded the state's math standard. On the Terra Nova, 8th grade students scored in the 53rd percentile in both reading and language arts and in the 54th percentile in math; the 50th percentile is average.[3]

Performance gaps between white and Asian students and African-American, Hispanic and Native American students remain large, between 20 to 30 percentage points. And across the board, low-income students' and ELL's performance is lower than average.

Arizona is 42nd nationally — **NAEP grade 8 reading, 2007**

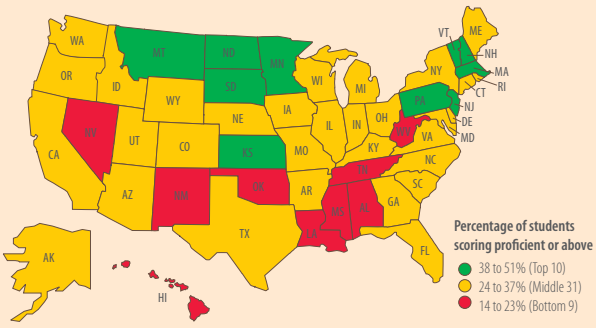
To reach the national average of 29 percent, Arizona needs to gain 5 percentage points. To reach the top performing states, Arizona would need to gain at least 12 points.



Source: *National Assessment of Educational Progress*

Arizona is 38th nationally — **NAEP grade 8 mathematics, 2007**

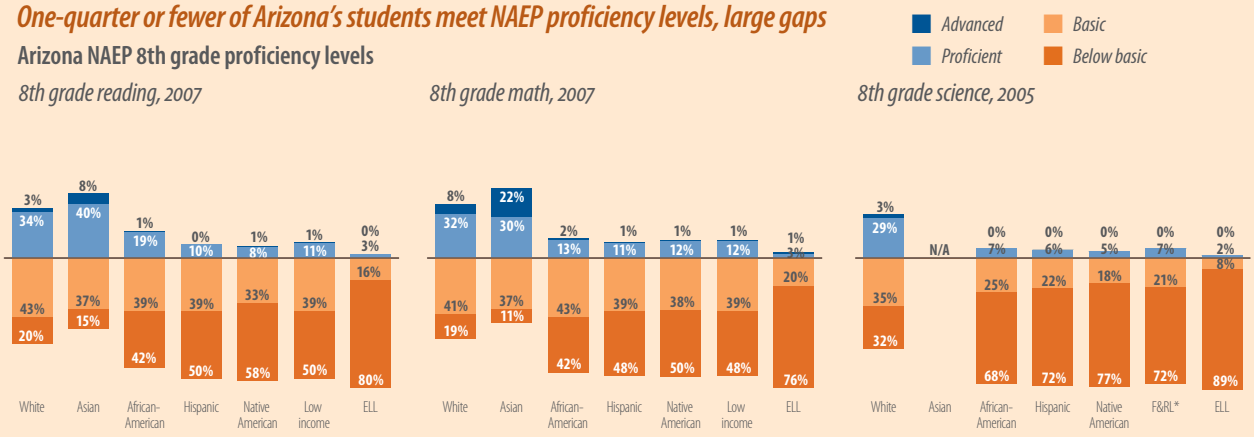
To reach the national average of 31 percent, Arizona needs to gain 5 percentage points. To reach the top performing states, Arizona would need to gain at least 12 points.



Source: *National Assessment of Educational Progress*

One-quarter or fewer of Arizona's students meet NAEP proficiency levels, large gaps

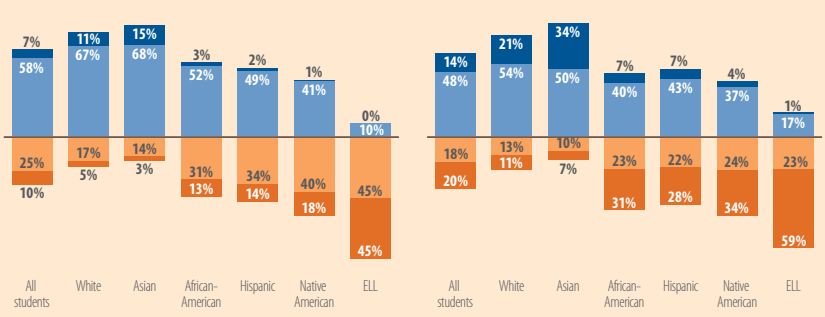
Arizona NAEP 8th grade proficiency levels



Source: *National Assessment of Educational Progress*

Fewer than 7 in 10 Arizona students meet AIMS proficiency levels, large gaps

AIMS 8th grade proficiency levels, 2007



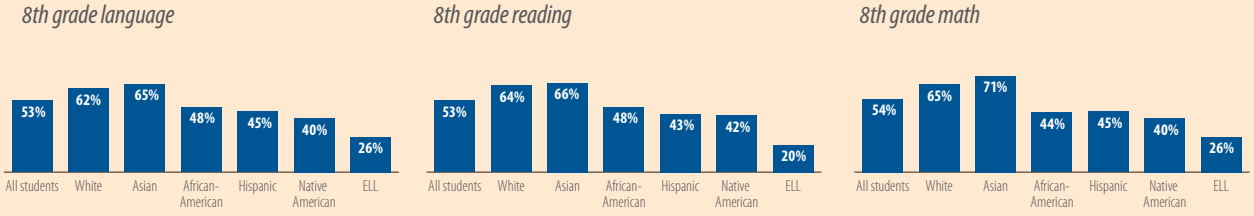
Student performance on the AIMS test is generally consistent across the middle grades, ranging from 62 to 72 percent of students meeting or exceeding the state standards, depending on subject and grade.

The state began field-testing an AIMS science test in spring 2007 and will administer it statewide in 2008.

Source: *Arizona Department of Education*

Students score between 53rd and 54th percentile on Terra Nova, large gaps

Terra Nova 8th grade percentile rankings, 2007



Student performance on the Terra Nova also is consistent across the middle grades. Scores on the full Terra Nova, which is given in grade 9 (rather than the smaller pool of questions added to AIMS-DPA in the other grades), differ from those in grade 8 by 1 to 4 percentage points, depending on subject.

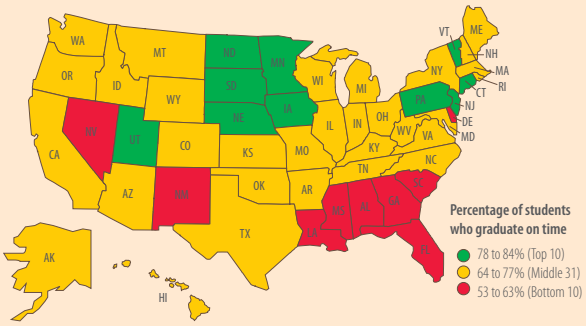
Source: *Arizona Department of Education*

High School

Today, graduating from high school is a bare minimum for success in life. Arizona's young people must have the knowledge and skills required by colleges and employers to compete in our global economy. Currently, too few of our youth complete high school, and too many receive diplomas when they are not prepared for higher education or for jobs that pay middle-class incomes. The consequences extend to both individuals and society.

Seven in 10 students graduate on time — about average nationally

Class of 2004 high school completion rates



Source: Diplomas Count 2007, *Education Week*

Arizona's graduation rates are about average

Arizona is about average among states for high school graduation, with 68 percent of students graduating within four years. On average, graduation rates for our Asian and white students are about 10–30 percentage points higher than for many of their African-American, Hispanic and Native American counterparts — mirroring achievement gaps generally consistent across grade levels and subjects.[1]

Top five reasons U.S. students say they don't finish school

Classes not interesting	47%
Missed too many days	43%
Spent time with people not interested in school	42%
Too much freedom	38%
Failing courses	35%

Source: The Silent Epidemic, *March 2006*

Each state sets its own graduation requirements, so meaningful comparisons are difficult to make. In Arizona, to graduate from high school, students must pass a set of courses (see the table on page 38 for how our requirements compare) and an exit exam — 23 other states have exit exams, and two additional states and the District of Columbia are phasing in such tests.[2]

AIMS, Arizona's graduation exam, measures 10th grade skills in reading, writing and math, and can be retaken numerous times before the end of 12th grade.

Sixty to 70 percent of students pass AIMS graduation requirement

High school students must pass AIMS tests to graduate. In 2006, about 28 percent of the state's 12th-graders (17,603 students) were unable to pass all three AIMS tests. However, the classes of 2006 and 2007 were able to augment their scores with coursework to earn a diploma.[3]

In 2007, about six in 10 students passed the AIMS math exam; 67 percent passed the reading exam; and 69 percent passed the writing exam. Since 2005, averages are unchanged in writing, down 1 percentage point in reading and down 4 percentage points in math.[4] Fewer than one in five ELLs pass the reading, math or writing exams.

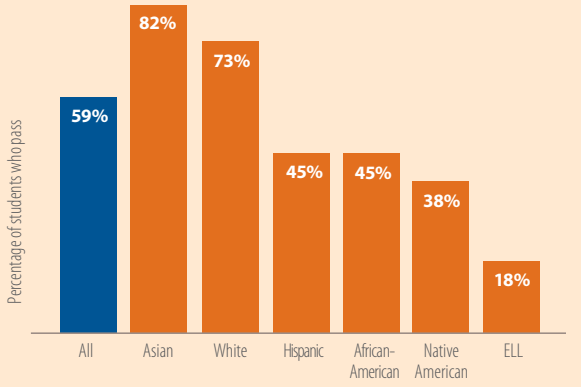
Many graduates are not prepared for college

College entrance exams — ACT and SAT tests — are one measure of students' readiness for college. Arizona students are not required to take these tests, and there is no incentive for students not planning to go to college to do so. Those Arizona students who take the test perform slightly better than the national average on the tests; the average composite score in 2007 on the ACT was 21.8 of 36, compared to 21.2 nationally, and 1547 of 2400 on the SAT, compared to 1524 nationally. But Arizona's ACT and SAT participation rates are very low — 18 percent and 32 percent in 2006, respectively, compared to 40 percent and 48 percent nationally. Participation of mostly better-prepared students elevates the average score for Arizona students compared to states with a higher participation rate.[5]

Advanced Placement (AP) courses, which offer students the chance to earn college credit in high school, are another predictor of how students will fare in college courses. Arizona's AP participation, as measured by the number of exams taken, is below the national average — 15.8 percent compared to 24.2 percent nationally.

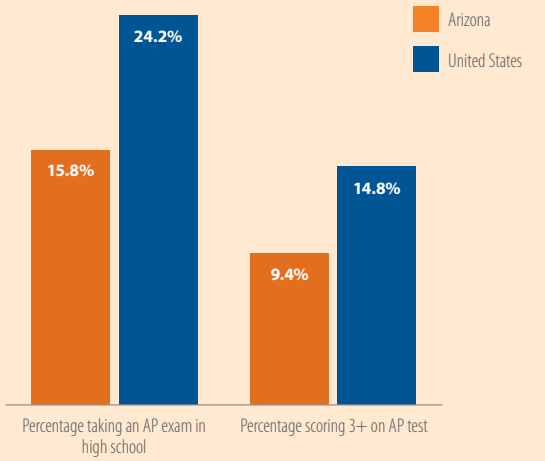
Less than 6 in 10 passed the state math test last year, and gaps are huge

AIMS high school math exam passing rates, by race/ethnicity, 2007 (includes test takers grades 10–12)



Source: *Arizona Department of Education*

Low participation and scores on AP tests, 2006



Source: *College Board, 2007*

Fewer than 10 percent of Arizona students score 3 (the minimum score required to earn college credit) or higher (out of a possible 5) on the exams, compared to about 15 percent nationally.[6]

Moreover, many of those who enroll in college are not prepared. In Arizona, fewer than half of the state's graduates are eligible for admission to the state's universities, based on their high school performance.[7]

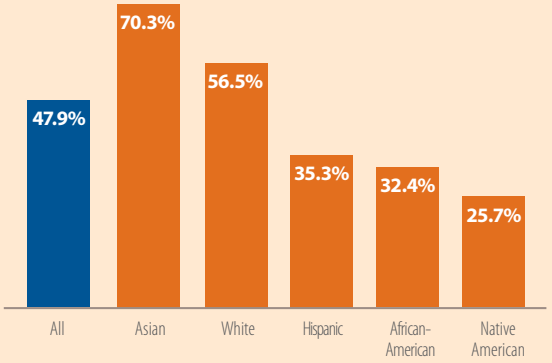
Moreover, many of those who are admitted to college have to enroll in lower-level courses to make up for academic deficiencies. For instance, 19 percent of freshmen at Arizona's four-year universities are enrolled in lower-division English or math.[8]

Although specific data are not available for all Arizona community colleges, we know from national studies that remediation rates generally are much higher in two-year colleges than in four-year universities. Data from the Maricopa County Community College District, which enrolls more than half of the state's community college students, show that between 20 percent and 42 percent of entering freshmen are not ready for college-level work, depending on the course.[9]

Finally, college is out of reach financially for many Arizona students. Based on the annual survey compiled by the National Association of State Student Grant and Aid Programs, Arizona ranks 48th of 52 reporting entities (50 states plus Washington, DC, and Puerto Rico), in the grant aid provided per student. States at the median position in the survey provided approximately 30 times more support per student than Arizona.[10]

Fewer than half of graduates are ready for college

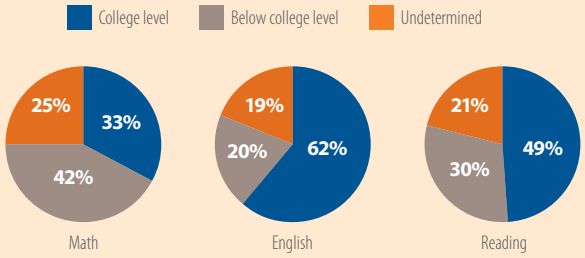
Percentage of Arizona high school graduates eligible for admission to the universities



Source: 2006 High School Eligibility Study, *Board of Regents*

Large numbers of community college freshmen are not prepared

Placement levels of freshmen who entered Maricopa County Community College District in fall 2006



Note: *"Underdetermined" placement level includes students who did not take a placement exam, and students whose level could not be determined by the exam taken.*
Source: *MCCCD District Office of Institutional Effectiveness, October 11, 2007*

Performance in Context

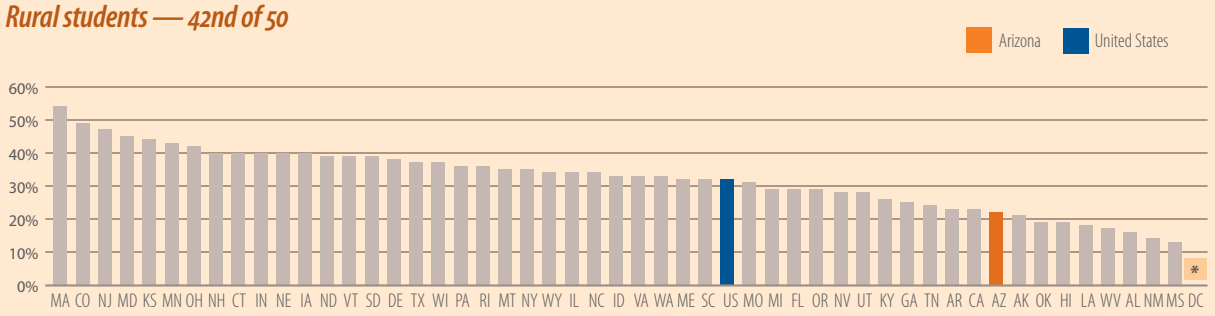
So what do these scores add up to?

It is clear that demographic challenges such as those described on pages 11–14 have a significant impact on student achievement. Although there are inspiring exceptions (see "Introduction," page 10), low-income and non-English-speaking students tend to underperform their peers.

When poverty, family structure, language proficiency and other factors are considered, Arizona's national averages look better. For instance, a RAND study shows that Arizona ranks 21st of 47 states on NAEP after accounting for family background.[1] Similarly, the Manhattan Institute's Teachability Index says Arizona ranks 30th in performance on NAEP after controlling for circumstances such as school readiness, economics, community factors, health, race and family circumstances.[2]

Yet when comparing discrete groups of students (such as Arizona's low-income students versus low-income students in other states), our students do poorly. Even on the 2007 NAEP 8th grade math test, where our performance was better than any other subject or grade, Arizona's rural students rank 42nd among all rural students; our low-income students rank 39th among their peers; our non-low-income students also rank 39th; our white students rank 25th; our Hispanic students rank 31st (of 43 jurisdictions); and our ELLs rank 23rd (of 32 jurisdictions).[3]

Rural students — 42nd of 50



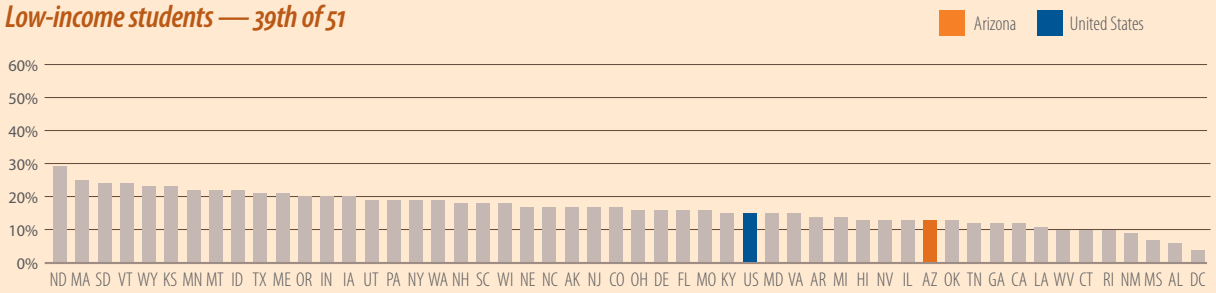
** Reporting standards were not met.*

Note: *All percentages are students scoring proficient or above on NAEP 8th grade math in 2007.*

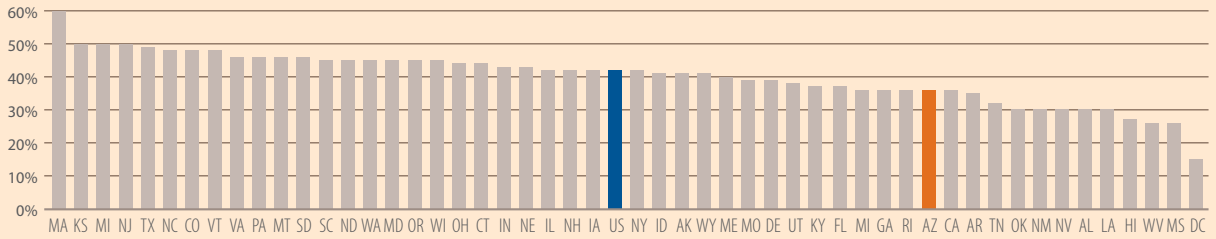
Note: *Observed differences are not necessarily statistically significant. Detail may not sum to totals because of rounding.*

Source: *National Assessment of Educational Progress*

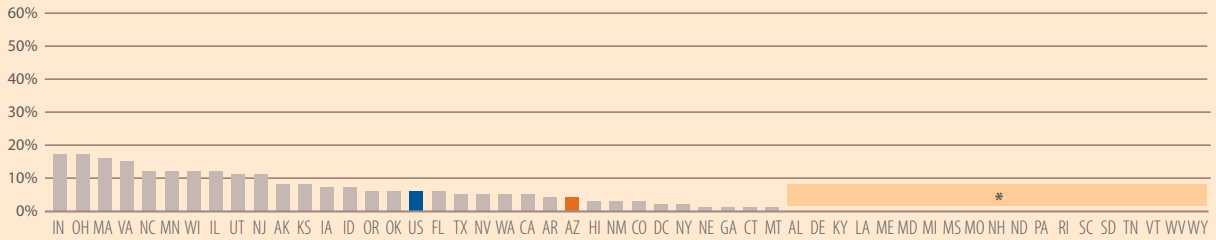
Low-income students — 39th of 51



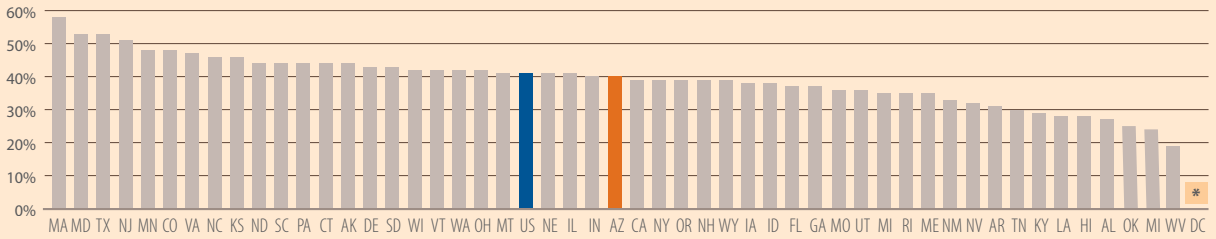
Non-low-income students — 39th of 51



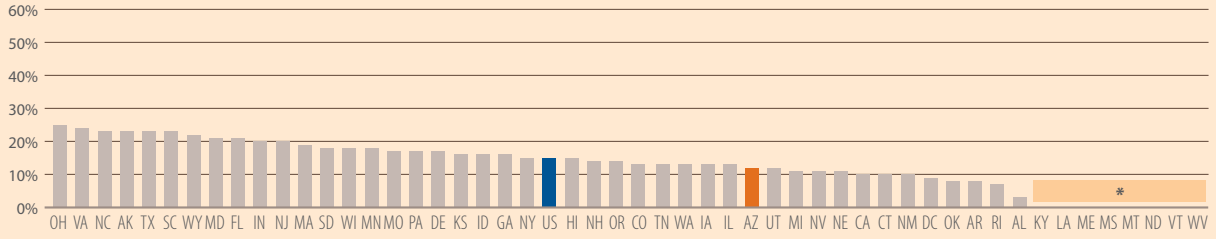
ELL students — 23rd of 32



White students — 25th of 50



Hispanic students — 31st of 43



** Reporting standards were not met.*

Note: *All percentages are students scoring proficient or above on NAEP 8th grade math in 2007.*

Note: *Observed differences are not necessarily statistically significant. Detail may not sum to totals because of rounding.*

Source: *National Assessment of Educational Progress*

System Conditions

Why These Five Conditions

Most states, including Arizona, start with standards, defining what student success looks like and how it will be measured, and use those results as the centerpiece of the larger accountability system.

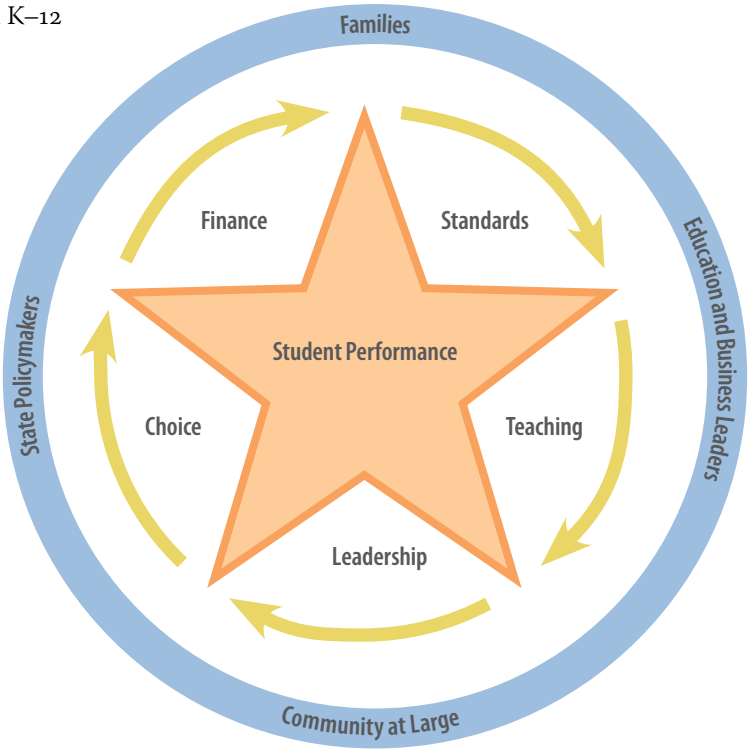
To help students achieve high **standards**, they need carefully constructed curricula taught by highly effective **teachers**.

Research also shows that teachers cannot do a highly effective job unless they work with strong **leadership**, so we also need outstanding principals and administrators.

While the standards are constant, a one-size-fits-all approach won't work for all students or families, so multiple **choices** are necessary to spur innovation within the system.

Finally, **funding** is critical to attracting and retaining great teachers and leaders, offering sufficient choices and providing the multiple instructional supports students need to reach the standards.

The following pages examine these five essential conditions for excellent learning in K–12 schools.



Standards and Accountability

Although the establishment of state academic standards has begun to transform education systems across the nation, two critical questions must be addressed if these sweeping changes are to lead to higher achievement for all Arizona's students. Will the standards in place today be adequate for the high-tech, globally focused future that many Arizonans envision? And how will the state make sure that all of the pieces of the system connect and reinforce one another? Not only do we need to re-examine our current standards, but we need to design a system that is dynamic and can continue to respond to an ever-changing world. High-quality standards are meaningless unless they are aligned with a rigorous curriculum and fair assessments across grade levels from pre-kindergarten through college, and unless educators are held accountable for helping students meet these standards.

Math and science expectations are lower than the national average

Academic credits required for high school graduation, class of 2006

	English	History	Math	Science	Other	Total
Arizona	4.0	2.5	2.0	2.0	9.5	20
U.S. average	3.9	2.8	2.7	2.5	8.6	20.5
Recommended*	3.75	2.0+	3.75 (including calculus, precalculus or trigonometry)	2.5+ (including biology, chemistry, physics)	2+ credits of foreign language, 1+ credits of computer science, 1+ Advanced Placement courses, and no remedial English or math courses	

*Students taking these recommended courses are most likely to complete a college degree.

Source: *Cliff Adelman,* Answers in the Toolbox Revisited: Paths to Degree Completion from High School through College, *U.S. Department of Education, February 2006, Washington, DC*

Arizona is taking steps to improve its academic standards

Over the past four years, the Arizona Department of Education (ADE) has worked with task forces of teachers from around the state, as well as the State Board of Education, to increase the rigor and richness of Arizona's academic content standards, which define what students should know (as opposed to performance standards or "cut scores," which determine the levels of achievement that allow one to pass the test). For 2006, the Thomas B. Fordham Foundation gave Arizona's content standards an A in U.S. history; a B for English, science and world history; and a C in math, based on the standards' organization, clarity and richness of content.[1]

The American Federation of Teachers (AFT) gave Arizona's math standards strong marks for being aligned to state tests and accessible to parents, teachers, students and the public. AFT also says Arizona is one of 17 states with at least three-quarters of its assessments aligned to strong content standards.[2] The state board was expected to increase math and science graduation requirements in December 2007. In addition, Arizona recently has committed to align its high school and postsecondary standards (only five states now do), and to align its high school tests with college admissions or placement requirements or employer hiring standards (only six states now do), according to the American Diploma Project (ADP), a multistate coalition that Arizona recently has joined. (See "Progress," page 40.)[3]

Arizona is working toward better aligning expectations, from preschool through college

The term "alignment" asks the question, "Are we adequately preparing our students to progress from one grade level to the next, for postsecondary education or for careers?" Like many states, Arizona has a series of disconnected "systems":

- Early care and education data systems are not linked to K–12 data systems, although information flows informally (e.g., kindergarten teachers typically are given an analysis of Head Start students' skills before the start of school).
- Likewise, higher education institutions' admission requirements and data systems are not linked to K–12 graduation requirements or data.
- A new system assigns a unique number for each student but does not yet track a student's progress across all early care, K–12 and higher education — a step that would enable educators throughout the system to work in concert on behalf of students.

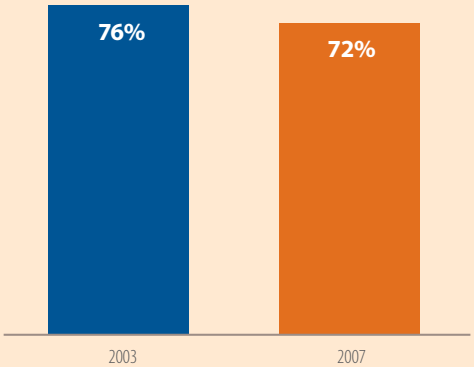
The Governor's P–20 Council is trying to strengthen these connections. (See "Progress," page 40.) Beyond creating better links, a related challenge is to create a series of common measures from preschool through college that policymakers, educators and the public agree provide an accurate and reliable assessment of performance.

Arizona is taking steps to strengthen its accountability system

Arizona holds schools and districts accountable for student performance on state tests through a program called AZ LEARNS. It combines the measures required by the federal No Child Left Behind (NCLB) law with the state's own system for tracking progress. The level of student performance expected on the state test (the passing score) is at or slightly below that of other states studied. For instance, a 2005 study showed Arizona was 19th of 34 states in grade 8 reading, and passing scores were very close to the National Assessment of Educational Progress (NAEP) "basic" level rather than NAEP "proficient." A 2007 report showed that the state's definitions of proficiency in grade 8 reading were slightly lower or at the average of the other 26 states studied.[4]

Since passage of the federal NCLB law in 2001, states have been required to annually report the percentage of schools making "adequate yearly progress" (AYP),

Seven in 10 schools making "adequate yearly progress"



Source: *Arizona Department of Education*

measured largely by reading and math test scores. Seventy-two percent of Arizona's schools made AYP in 2007, up from 67 percent the previous year but down from a high of 86 percent in 2005.[5]

Few take advantage of tutoring, transfer options

Although NCLB requires any school "in need of improvement" for three years to provide free tutoring to low-income students, the auditor general's report found that only 2 percent of eligible students participated in tutoring in fall 2005 — partly because schools were not communicating effectively.[6] In response, ADE has expanded its outreach and reports that participation increased to 8 percent of eligible students by spring 2006.

NCLB also allows students who attend schools needing improvement for two years to transfer (with free transportation) to another higher-performing public school in the district.[7] But few parents are using this option; for example, 7,530 Tucson students were eligible to transfer in 2003–04, but only seven requests were made and, of those, only five students actually transferred.[8]

PROGRESS

The statewide P–20 Council, established in July 2005 by Governor Napolitano and including key players from early learning, K–12 education, business, and Arizona's community colleges and universities, has developed recommendations to help strengthen all aspects of the system from preschool through higher education.[9]

Among the recommendations are a review of Arizona's current math and science standards, comparing them with national and international benchmarks and aligning them with higher education expectations. The council also recommends that: Students take Algebra I by 8th grade; Arizona increase the math requirement for graduation from two credits to four; and Arizona increase student access to AP and International Baccalaureate courses.[10]

In summer 2007, Arizona became one of only eight states to win approval from the U.S. Department of Education to test growth models for measuring individual student progress on reading and math tests. Educators and researchers say that this is a more sophisticated and accurate way to assess student learning because it allows one to track the progress of individual students from year to year.[11]

The new state system, the Integrated Data to Enhance Arizona's Learning (IDEAL), will collect data from different sources statewide and make it accessible to help districts, schools and teachers improve. The system should provide a more comprehensive look at teacher and student demographics, test scores and trends to help teachers and administrators make decisions about programs and interventions.[12]

In 2003, ADE launched the Arizona High School Renewal and Improvement Initiative in partnership with the Governor's office, higher education, business and secondary educators to improve the graduation rate, engage teachers in using data-driven decisionmaking in school improvement efforts, increase curricular rigor, strengthen AIMS intervention and deepen teacher's pedagogy of adolescent literacy.[13]

Teaching Quality

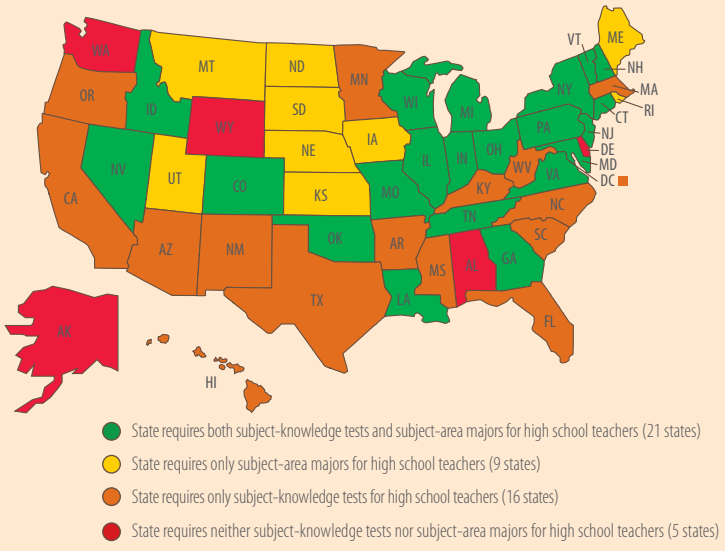
Research is clear: More than any other school-based factor, having high-quality teachers is what makes the difference in closing achievement gaps between groups of students and in overcoming such obstacles as poverty. The challenge is ensuring that all students have effective teachers every day in every classroom. Most states are working on teacher quality as a central education reform strategy.

Teacher preparation programs must be strengthened

Teacher preparation has improved over the years, with changes in instruction, content and methods, but recent reports argue that preparation programs still are not producing the kind of teachers that are needed in today's classrooms.[1] There is agreement that any preparation program should prepare a strong beginning teacher: one who understands the content and basics of the profession. Arizona prepares teachers through university-based teacher preparation programs, alternative programs such as Teach for America and accelerated university programs that help professionals from other fields make the transition to teaching. For instance, the National Science Foundation sponsors the Robert Noyce Scholarships, a $9 million grant program to universities for identifying talented science, technology, engineering or mathematics undergraduates or professionals who will go into teaching.[2]

According to the *2007 State Teacher Policy Yearbook,* published by the National Council on Teaching Quality (NCTQ), Arizona's preparation programs get low marks. We receive a D for our teacher preparation programs and an F for preparing special education teachers. The reviewers fault the state

Arizona requires subject-knowledge tests for high school teachers only



Note: *Data represent the 2004–05 school year.* ***Source:*** *Editorial Projects in Education, 2004*

for not requiring candidates to pass a basic skills test before being admitted to a teacher preparation program, requiring excessive amounts of coursework and not ensuring that special education candidates receive relevant subject-matter training.[3]

The state also does not set a minimum grade point average for course-taking in preparation programs, although our individual universities do. The U.S. Chamber of Commerce gives us a D grade for our teacher workforce policies, citing our lack of basic skills requirements.[4]

Certification policies

Arizona is one of 13 states and the District of Columbia that does not require a subject-area bachelor's degree for initial certification.[5] Thirty-three states have such requirements for all initial certificates, and another four states require a bachelor's degree for at least one certificate.[6] We have 61,880 public school teachers.[7] Of them, 1 percent have a doctorate, 44 percent have a master's, and the remaining 54 percent have a bachelor's degree.[8]

Arizona is among 29 states that require all teaching candidates to pass a professional knowledge assessment, which measures knowledge of teaching methods, theories and techniques.[9] However, unlike most states, Arizona does not use a basic skills assessment that gauges basic reading, writing and math competency in order to obtain a teaching certificate.

Attracting the best

Two major recent reports have encouraged the United States to develop policies explicitly designed to attract leading college students into the teaching profession. The New Commission on the Skills of the American Workforce says it is no coincidence that Singapore, which tops the list of all the nations in mathematics and science achievement, recruit its teachers from the top third of high school graduates going on to college.[10] The National Academy of Sciences, the National Academy of Engineering and the Institute of Medicine urged that scholarships be given to 10,000 of America's brightest students who agree to teach science and mathematics.[11]

Pay for performance

In 2006, eligible employees earned up to $8,400 more a year because of Proposition 301, a 2000 referendum that called for pay for performance in all school districts.[12] Since Proposition 301's inception, the statewide average teacher salary has increased by close to $5,800, with the largest portion of this increase, approximately $3,900, occurring in fiscal year 2006.[13] In addition, about 70 percent of eligible teachers are participating in the state's Career Ladder Program, through which 28 districts provide incentives to teachers to advance in their profession as mentors and coaches, for example, without having to become administrators.[14] Arizona also is one of eight states participating in the Milken Family Foundation's Teacher Advancement Program, which offers incentives to teachers.

The *2007 State Teacher Policy Yearbook* gives Arizona a C for its policies on teacher certification and alternate routes. The study recognizes the state's effort to develop teaching standards that are connected to student learning, but it says the standards lack needed specificity and faults the state's reciprocity rules, which make it difficult for qualified out-of-state teachers to transfer their licenses. However, a 2007 law expands the state's reciprocity policy.[15] New legislation was passed this year (HB2714) that expands the state's policy on reciprocity by excusing new teachers from other states from taking the Arizona Educator Proficiency Assessments test if they have taken a similar exam in the state where they initially were certified.

Low grades for teacher evaluation and compensation policies

Arizona policies receive a D from the *2007 State Teacher Policy Yearbook*, which faults the state for having annual evaluations that are "not based on evidence of classroom effectiveness," for not having value-added data that measure teacher effectiveness and for granting tenure after only three years of teaching. The NCTQ national report card, however, singles out the state's performance-pay plan as "a bright spot in an otherwise bland teacher accountability landscape."[16] (See "Pay for performance," above.)

Although trends are improving, the salaries of Arizona teachers still lag behind those of teachers in other states, ranking 27th nationally.[17] Of our neighbors, only New Mexico and Utah have lower average salaries. Some states offer financial incentives to recruit effective teachers to hard-to-staff schools or high-need subject areas; Arizona does neither. The base salary in most districts is extremely low — $28,218 in Maricopa County,[18] for example, with many districts well below that figure, though some are quite a bit higher, such as Alhambra School District, which recently raised its starting pay to $40,000 a year.[19]

In response, the Governor's Committee for Teacher Quality and Support recommends that Arizona set a base salary of $35,000 to retain new teachers and provide prospective teachers with an incentive to choose teaching as a career.[20] Whether this is enough of an incentive is an open question. The National Association of Colleges and Employers (NACE) reported that the class of 2007's beginning salaries in many other fields are considerably higher than what a beginning teacher would earn:

Chemical engineers	$59,361
Computer engineers	$56,361
Accounting majors	$46,718
Business majors	$43,701
Marketing majors	$40,161
History majors	$35,092

Source: *The National Association of Colleges and Employers*

Retention and shortages are a problem, especially in certain areas

Historically, Arizona has experienced teacher shortages in rural areas near or in reservations serving Native American students and in fast-growing counties, such as Maricopa or Pinal.[21]

Emergency certificates

One way to deal with shortages is to allow less than fully qualified individuals to work with emergency certificates or waivers, which are stop-gap measures designed to last for one year at most. In 2004–05, Arizona reported 3.7 percent of its teachers on waivers, compared to the national average of 2.5 percent, with a higher concentration (6.9 percent) in high-poverty districts.[22] In Pinon and Gadsden school districts, for instance, more than one-third of its teachers have only emergency certificates. In a few other districts, 20 percent or more fall into that category.[23] Waivers and out-of-field teaching (teachers who are assigned to teach subjects that do not match their areas of preparation or certification) shortchange students because teachers often lack the necessary expertise to provide students with the knowledge and skills they need, exacerbating the achievement gap.

Number of teachers lacking basic qualifications indicates shortage

Percentage of teachers on waivers by poverty status, 2004–05

	Teachers on waivers	Teachers on waivers in high-poverty districts	Teachers on waivers in all other districts
Arizona	3.7%	6.9%	3.1%
United States	2.5%	3.0%	2.1%

Source: *U.S. Department of Education, 2006*

Subject-area shortages

In 2004–05, close to 10 percent of all special education teachers in Arizona were working with a waiver, compared to 5 percent nationally.[24] Secondary math (5.3 percent) and science (4.2 percent) also had slightly higher percentages of teachers working under waivers than the national averages (3.0 percent and 2.9 percent, respectively).[25] As a result, students are less likely to have highly qualified teachers in these areas.

Retention

Of the 5,200 Arizona educators surveyed statewide by the Center for Teaching Quality in 2006, 18 percent wanted to leave their school, and 9 percent wanted to leave teaching altogether. Fifty-nine percent cited a lack of support from administrators, followed by feeling ineffective with their students (55 percent) and low salaries (50 percent). Nationally, about half of all new teachers leave within the first five years.[26] Arizona's attrition rate mirrors the nation's, with half of our new teachers leaving in their first five years; altogether, we lose an estimated $88 million annually from teacher turnover — half from teachers who transfer schools, half from those who quit altogether.[27]

In response to such challenges, the Governor's Committee on Teacher Quality and Support recommends providing such incentives as one-time hiring bonuses, housing assistance, scholarships or student loan repayments to attract teachers to high-poverty or rural schools.

Teachers also say quality professional development is important. Arizona teachers generally give high marks to their training, but they report needing more help to reach students with disabilities (50 percent), close the achievement gap (46 percent) and help English language learners (44 percent).[28] The state receives and distributes $40 million annually in federal funds for professional development, plus additional funds generated by Proposition 301 and the Department of Gaming's Instructional Improvement Fund.[29] Thus, the state offers an array of professional development programs, but as is the case nationally, there is no evidence whether or how these programs lead to increased student learning.

PROGRESS

Governor Napolitano, the Arizona K–12 Center and ADE have developed the Arizona Teacher Excellence Plan, which offers scholarships to expand the pool of highly qualified Native American teachers.[30]

Some 348 Arizona teachers have earned advanced certification from the National Board for Professional Teaching Standards, up significantly in the past few years.[31]

The Rodel Foundation of Arizona is partnering with the state's colleges of education and high-poverty school districts to pair Rodel Exemplary Teachers with Rodel Promising Student Teachers. New teachers who opt to work in high-poverty areas for at least three consecutive years receive a $10,000 U.S. savings bond after their third year. Rodel Promising Student Teachers are named by Colleges of Education to teach with a Rodel Exemplary Teacher. The Rodel Student Teachers receive a $1,000 college tuition waiver while student teaching and a $10,000 U.S. Savings Bond from Rodel after teaching in a qualifying school for three consecutive years.[32]

ADE's IDEAL, supported by part of a $6 million federal grant, serves as an online gateway to an array of K–12 professional development and curricular resources. To date, the professional development portal has been used over 123,000 times by Arizona teachers and has been utilized by other educators in almost 40 countries.[33]

The Governor has contracted with the Arizona K–12 Center to develop a process for identifying "distinguished educators" to serve as master teachers. The fiscal year 2008 budget passed by the legislature included the Governor's requests for $46 million in teacher pay and benefits as well as a $2 million increase in the Governor's Master Teacher Program.[34]

The Maricopa College and Career Transitions Initiative, part of a national program, is a partnership among three colleges in the Maricopa system (Estrella Mountain Community College, Phoenix College and South Mountain Community College), ADE, and the U.S. Department of Education's Office of Vocational and Adult Education. This dual-enrollment program is structured to increase the number of students participating in teacher education programs, in which students can earn associate degrees in secondary education.[35]

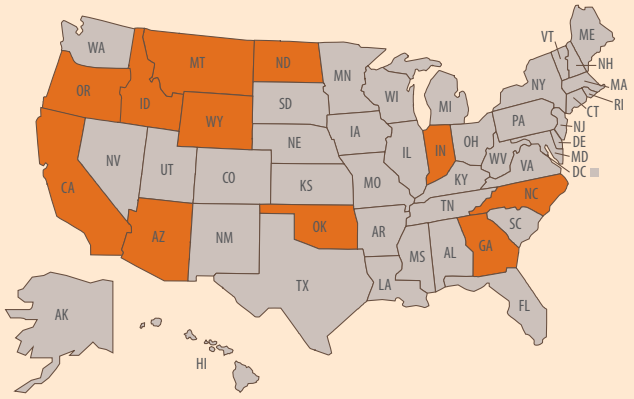
Leadership and Governance

Laws, policies, regulations, the allocation of resources and the quality of leadership — at the state, school and district level — have a significant impact on student achievement. Because governance and leadership are very difficult to measure, however, there are few useful national or state comparisons.

State and local leadership structures diffused

Like most states, Arizona has complicated governing structures that have evolved over time and, as a result, decision-making, authority and accountability are diffuse. Decisions are made at every level, and the quality of the system as a whole reflects actions taken within schools, districts, counties and the state. On the face of it, this cumbersome reporting and governing structure makes it difficult for schools to have both the autonomy they need to serve students well and to be truly accountable for their performance.

Eleven states with similar governance structures



Source: *Adapted from Briefing Memo on Educational Leadership, Education Commission of the States, May 2005*

State level

Arizona is one of 11 states with an elected superintendent working with a state board appointed by the governor.[1]

Governor	Legislature	Board of education	ADE	Elected state superintendent
Nominates members of the 11-member state board of education; proposes policies, budgets and programs	Approves 10 members of the 11-member state board of education; authorizes and funds education programs	Sets policy for all public schools in the state; establishes incentives (grants, awards, etc.); can withhold funds for noncompliance	Manages education programs; implements federal education laws; manages federal education funding	Elected every four years; oversees ADE; serves as executive member of state board of education

Local level[2]

15 counties	219 local school districts
Each county has an elected superintendent who oversees county school operations; operates "accommodation schools" for students not served by a district; has responsibility for local funding and for administering local, state and federal programs in 1,962 public schools (shared with school districts).	Each district has an elected school board that appoints the district superintendent; has responsibility for local funding and for administering local, state and federal programs in 1,851 public schools (shared with counties); districts range in size from less than 200 students to more than 70,000; many different configurations include: ■ 106 elementary school districts ■ 15 union high school districts ■ elementary districts within secondary districts (with two school boards) ■ 98 unified K–12 districts (with a single board) ■ "accommodation" schools for students not served by a district ■ "overlay districts," such as the joint technical education districts that provide vocational education services to more than one district

In addition ...

- **20 Indian tribes** manage education through various schooling arrangements, including student enrollment in regular district schools, in the 54 federal Bureau of Indian Affairs schools and in charters and other public and private schools on tribal lands. Tribal departments of education typically coordinate local, state and federal services and regulations related to the diverse set of school options.[3]
- **469 charter schools,** including seven virtual schools that are exempt from many state education laws, are overseen by one of three groups: the state board of education, the Arizona State Board for Charter Schools or local school boards.[4]
- **616 private schools** are exempt from many state education laws.[5]
- **Home schools,** which are loosely overseen by regional superintendents, serve an unknown number of students (parents must simply file an affidavit with the county superintendent to home school, and there are no other state requirements).[6]

To help simplify our complex structure for building and sustaining leadership in education, a state redistricting commission is preparing recommendations for some elementary and high school districts to merge, creating a more seamless K–12 administrative approach and the opportunity to reduce dollars spent on administration.[7]

Growing recognition about the importance of strong school leadership

While larger system changes are important, school leadership has a more direct influence on teaching and learning. A 2003 review by the American Education Research Association found that only the quality of the curriculum and teachers' instruction had more impact on student learning than school leadership. Arizona teachers say the most important factor in determining whether they stay or leave the profession is the competence of the building leader.[8]

The National Governors Association says, "Leadership appears to especially impact the quality of teaching in schools. School leaders provide focus and direction to curriculum and teaching and manage the organization efficiently to support student and adult learning."[9]

Partly in response, large districts such as Boston, Chicago, Houston, New York, Oakland, San Francisco and Seattle have adopted decentralized models, which give principals more autonomy in return for increased accountability for results. Many of these plans draw from the successes of the Edmonton, Canada, school system, which pioneered the site-based management approach more than two decades ago. Political and education leaders from Delaware, New York and Ohio also are considering similar strategies statewide.

A 2007 study by the U.S. Chamber of Commerce awards Arizona comparatively high marks for school leader autonomy.[11] Seventy-two percent of Arizona's principals say they have a major influence over school spending, and 94 percent say they have a major influence over hiring new teachers, both above the national average.[12]

Beating the odds

Recent Morrison Institute for Public Policy and the Center for the Future of Arizona research on 12 steadily improving Arizona schools with a majority of low-income and Hispanic students found the quality of leadership helped explain their success.[10] The report recommended the following for all schools:

- Provide a leadership institute for principals that focuses on leadership, learning and linking people and resources.
- Offer a major talent initiative that includes opportunities for school leaders to attend leadership academies, programs that teach collaborative education processes with data analysis and high-quality mentoring for new teachers.
- Begin public and private efforts to help schools obtain the necessary technology and skills to use those tools to produce and analyze student data.
- Disseminate best practices and a list of "what works" as widely as possible.
- Drive authority downward to the principal.
- Reward collaboration.
- Be patient.

Inadequate data to judge our leaders

There also is growing agreement that the principal's job has become increasingly demanding. A recent report from Stanford Education Leadership Institute observed:

> The role of principal has swelled to include a staggering array of professional tasks and competencies. Principals are expected to be educational visionaries, instructional curriculum leaders, assessment experts, disciplinarians, community builders, public relations and communication experts, budget analysts, facility managers, special-programs administrators as well as guardians of various legal, contractual, and policy mandates and initiatives. In addition, principals are expected to serve the often conflicting needs and interests of many stakeholders, including students, parents, teachers, district office officials, unions, and state and federal agencies.[13]

But there is little hard data to judge the performance of school leaders or the programs that prepare them — in Arizona and nationally. Are Arizona's administrators well-qualified for their jobs? Are Arizona's licensing requirements stringent enough? How well do our university-based leadership programs prepare administrators? What is the quality of administrators' ongoing professional development? Do some courses and/or institutions

yield better results than others? Do we have enough well-qualified school leaders, and are they placed in the schools that need them most? Are there shortages? And for each of these questions, how does Arizona compare nationally? There is no way of answering these questions with any precision. Licensing and certification, as in most states, are based largely on the number of courses taken, not on demonstrated performance on objective measures.

Several recent national studies, however, have offered powerful critiques of states' licensing, preparation and professional development programs and have strongly recommended major improvements. The quality of most administrator preparation programs ranges from "inadequate to appalling," reported a 2005 study led by Arthur Levine, then president of Teachers College at Columbia University. The report found that most programs had low standards, watered-down course requirements, weak faculty and an incoherent curriculum.[14]

Our principals have low salaries and poor working conditions

Evidence suggests that Arizona is having a hard time encouraging potential administrators to fill available jobs. Although ADE reports issuing 7,300 administrative certificates to potentially fill the 3,000 positions (including superintendents, principals and assistant principals) available in 2004, many of those with certificates do not end up taking administrator jobs.[15] A recent Arizona State University (ASU) survey found that more than half of respondents said that low pay is the main reason why candidates may not seek leadership positions.[16]

The ASU survey found that administrators do not have enough time or funding for or access to professional development, and they feel training should be focused on the specific needs identified in each region.[17]

Arizona administrator salaries are low and vary among districts

Salary ranges for school administrators, 2004–05

District size (by student enrollment)	Superintendent	Elementary principal	Middle school principal	High school principal
Fewer than 500	$65,000	$50,078	$55,500	$57,000
500–5,000	$87,562	$64,000	$62,448	$67,785
5,001–10,000	$105,082	$77,847	$77,375	$79,380
10,001–20,000	$115,000	$82,577	$81,749	$88,913
More than 20,000	$149,100	$84,217	$83,116	$88,205

Source: *AEPI,* Arizona School Boards Association, Salary Survey 2004–05, *2005*

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Several initiatives are under way to strengthen school leadership in Arizona, though their impact is not known at this point. Efforts include:

- **AZLEADS3, a statewide initiative, supports principals and superintendents in their efforts to improve student achievement. Efforts include the Circle of Honor recognition program and three-year leadership grants.[18]**
- **A three-year, $3.6 million grant from the Wallace Foundation aims to develop leaders and improve educational leadership across Arizona.[19]**
- **The Learner-Centered Leadership program serves approximately 100 administrators through mentoring and coaching. Arizona State University sponsors the program — in collaboration with Alhambra Elementary School District, Creighton Elementary School District, Phoenix Union High School District, Roosevelt Elementary School District, and the Southwest Center for Education Equity and Language Diversity.[20]**
- **Professional Learning Communities helps Phoenix and Tucson administrators address issues associated with school reform and related challenges.[21]**
- **The Leadership Institute for Technology, housed at the Arizona K–12 Center, provides technology workshops.[22]**
- **The Rodel Foundation's math initiative, MAC-Ro, provides professional development to administrators and liaison/mentors throughout the state, helping teachers deliver more effective instruction.[23]**

School Choice

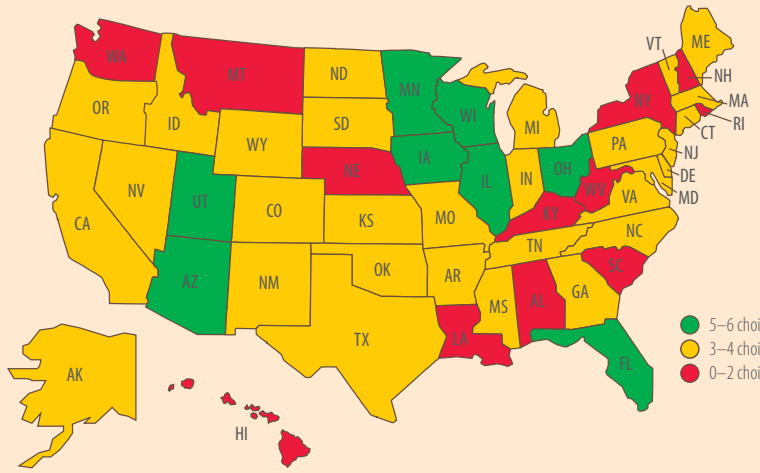
If our students are going to succeed in a more competitive global economy, our schools must lead the way in excellence and innovation. Parents should have the right to choose the best public school for their child, and providers should be held to consistent standards of quality to ensure that the promise of choice — individualized learning, high achievement and equity of opportunity for each child — is realized. Oversight and accountability are needed to ensure that quantity translates into quality.

Arizona families have a variety of choices

The state is considered a leader in offering families a choice of public school options, especially charter schools.

In Arizona, opportunities for families to choose a school have expanded significantly since the 1990s.[1] Currently, there are myriad options:

*A leading state in providing choices**



***Source:** Heritage School Choice Web site for all data except dual enrollment. Dual enrollment data from* State Dual Enrollment Policies, *U.S. Department of Education, 2004.*

*Based on whether the state has the following six options: open enrollment, charter schools, vouchers, tax credits, dual enrollment and home schooling.

Current choices available

Type of choice	Do Arizona families have this option?
Magnet schools: Magnet schools specialize in certain curricular areas, such as science or the performing arts. Typically, such schools draw students from various attendance areas within a district, as well as from other districts.	**Yes.** Twenty magnet schools, mostly in Tucson for desegregation purposes, serve 15,267 students.[2]
Open enrollment: The process allows students to enroll in a public school outside the boundaries of their traditional enrollment zone. There are two different types of open enrollment depending on local and state policy and space availability within existing schools: Students can choose a public school within the local school district (intradistrict) or a public school that is not within the district (interdistrict).	**Yes.** Arizona is one of 28 states with both an intradistrict and interdistrict open-enrollment policy.[3]
Charter schools: Founded by parents, educators, community groups or private organizations, charter schools essentially are deregulated public schools. They are funded with public taxpayer money and exchange fewer regulations and requirements for more accountability.	**Yes.** Arizona has the second-largest percentage of students in charter schools in the nation, with 469 charter schools serving 93,210 students statewide.[4]
Dual/concurrent enrollment: Dual/concurrent enrollment allows secondary school students to enroll in postsecondary courses and apply course credit at the secondary school, at postsecondary institutions or both.	**Yes.** Arizona is one of 38 states with dual-enrollment policies. In 2006, 3,828 students statewide were enrolled in college-level classes offered in 10 community college districts.[5]
Vouchers: Vouchers are payments made to a parent or an institution to pay for a child's education expenses, usually at a private or parochial school. Though some voucher programs are financed through private sources, others use public tax dollars to fund tuition at private institutions.	**Yes.** A bill passed in the 2006 legislative session would give vouchers to special education students and foster children. A lawsuit has been filed with the state supreme court to prevent implementation of the program.
Tax credits and deductions: Some tax credits and deductions allow parents to redirect their tax dollars to offset some of the expenses incurred by sending their child to a private school. Other tax credits and deductions allow individuals and/or corporations to redirect their tax dollars to scholarship-granting organizations, which in turn redistribute these contributions to students in the form of private school scholarships.	**Yes.** Arizona is one of only six states (AZ, FL, IL, IA, MN, PA and RI) with a tax credit program.[6] Arizona law allows taxpayers to claim a nonrefundable tax credit of up to $500 for a cash contribution to a nonprofit organization that distributes scholarships or tuition grants to private and parochial schools. In 2005, 22,522 students received scholarships.[7] Arizona law also allows taxpayers to claim a nonrefundable tax credit of up to $200 as reimbursement for fees paid to a public school for extracurricular activities.[8] A new program passed in a recent session of the legislature allows business tax credits up to $5 million for low-income student tuition in private schools. The program was expanded to $10 million and will increase by 20 percent each year after.[9]
Private schools: Private schools are privately owned and religious or nonsectarian. These schools charge tuition for admission.	**Yes.** In 2003–04, 616 private schools served 53,887 students in Arizona.[10]
Home schools: Home schooling is an alternative form of education in which parents or guardians teach their children at home.	**Yes.** In the United States, more than 1.1 million children (grades K–12) were educated at home in 2002–03. Figures for Arizona are difficult to pinpoint, as reporting is not required.[11]

In 2005, Arizona had only 2.2 percent of the nation's public school students,[12] but the state is home to 13 percent of all charter schools in the nation, and it has the second largest share of public school students in charter schools, behind only the District of Columbia.[13] The Center for Education Reform gives Arizona an A for one of the strongest charter laws in the nation based on such criteria as the number of charters allowed and the degree of autonomy permitted.

Second largest percentage of charter schools nationally

Top five states in number of charter schools, 2005–06

State	Number of charter schools	Number of students served	Percentage of total public school population in charters
1. District of Columbia	63	17,819	23.1%
2. Arizona	469	93,210	7.6%
3. Michigan	226	91,567	5.3%
4. Ohio	297	72,000	3.9%
5. California	574	212,000	3.4%
Nation	3,613	1,040,536	2%

Source: *National Alliance for Public Charter Schools and NCES,* Numbers and Types of Public Elementary and Secondary Education Agencies from the Common Core of Data: School Year 2005–06.

Charter schools operate in 14 of the 15 counties in Arizona, but 74 percent of all charters statewide are in Maricopa and Pima counties.[14]

Charter schools perform comparatively well

Students in Arizona charter schools were more likely to be proficient in reading and math at the 4th grade level than students in the neighboring regular school, according to Harvard economist and researcher Caroline Hoxby.[15] In addition, Arizona students of similar ethnicities were more likely to do better in charter schools than in regular schools.

Two reports in 2004 found that, on average, charter school students started school with lower scores but achieved an overall annual academic growth three points higher than their traditionally schooled peers[16] and that slightly more than 40 percent of charter schools were "highly performing" or "excelling," compared to 27 percent of traditional schools.[17] Arizona's 4th and 8th grade charter students outperformed noncharter students on the National Assessment of Educational Progress' reading and math tests by between 9 and 14 percentage points in 2005.[18] However, charter students underperform compared to district students on high school Arizona's Instrument to Measure Standards; high school students do not take the NAEP.

Moreover, 80 percent of charter school parents give their child's school an A or A+ for overall quality.[19]

Virtual schools in Arizona

Virtual or online schools are quickly becoming a viable option for students in rural areas and for those students with complex schedules. A pilot program legislated in 2003 and run by ADE allows for 14 virtual schools in Arizona. In 2005, 10,816 students took at least one class through these schools.[20] Half the virtual schools are operated by school districts, and half are operated by charter schools. The Arizona State Board of Education and the Arizona State Board for Charter Schools must review each school's effectiveness. Virtual schools must re-apply every five years to remain open; the first reviews will come in 2008.

Mixed report on oversight and accountability

The Thomas B. Fordham Institute gives Arizona a B for authorizer practices and quality of oversight.[21] The Arizona State Board for Charter Schools authorized more than 73 percent of Arizona's charter schools as of 2003. It is charged with ensuring quality and accountability. However, many other states provide significantly greater accountability tools to ensure that charter schools are meeting their academic and financial obligations.

Current Arizona charter contracts are granted for 15 years, which makes it difficult to hold schools accountable for poor performance.[22] Of the 40 states with charter systems, most have five-year terms or shorter; only Arizona and Washington, DC, have 15-year terms.[23] Arizona's first 40 charter school renewals will begin to be considered in 2009.

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Newsweek **named 11 charter schools to its 2007 Top 1,000 High Schools. BASIS Charter in Tucson was the highest-ranked charter school, ranking third nationally. BASIS Charter boasts 100 percent of graduating seniors with at least one passing grade on an AP or IB test.[24]**

Public School Finance

In school finance, there are basically three issues. First, is funding adequate — that is, does each school have enough money to ensure all students meet state standards, even if that means some students will need a greater investment than others, such as students who don't speak English or come from a low-income family? Second, is funding equitable — that is, are state and local funds distributed in a way that most schools have a similar amount to spend per pupil, regardless of their local community's wealth? And third, is funding efficient and effective?

Is our funding adequate?

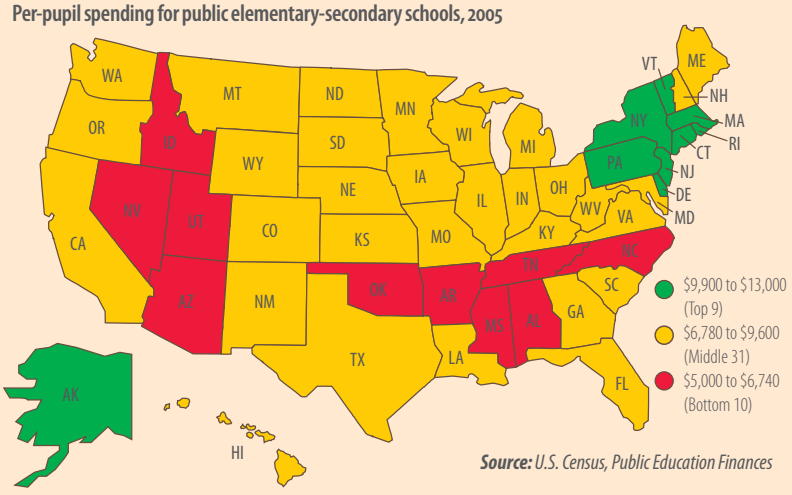
The central school finance question for the state is whether the amount of money available to districts and schools is adequate for preparing all students for college or the workplace and beyond. The past decade has seen a surge of lawsuits across the country claiming that no matter how equally money is distributed, current levels of spending are inadequate to accomplish the task, especially for children who come to school unprepared and with greater needs.

The payoff

New research is helping policymakers and the public see the benefits of educational investments more clearly, such as the $3 gained for every $1 invested in quality early childhood programs[1] and the average $127,000 saved in social welfare costs for each new high school graduate.[2]

Only Idaho and Utah spend less per student than Arizona

Per-pupil spending for public elementary-secondary schools, 2005



Source: *U.S. Census, Public Education Finances*

Arizona's per-pupil spending is low, and capital costs are high

Operating expenditures

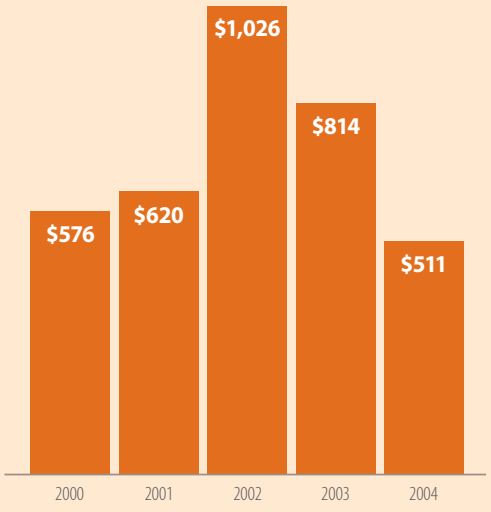
Arizona's per-pupil funding is very low compared to other states: Operating expenditures (annual expenditures covering everything from salaries to textbooks) in 2004–05 were $6,261 per student, while the national average was $8,701. The state share of school revenues is slightly lower here than the national average. Only two states spend less per student.[3]

Capital expenditures

Operating funds directly affect student achievement, whereas capital funds are longer-term investments in facilities and construction that have an indirect impact on student learning. Capital funds — chiefly used for school construction — are raised and allocated separately from operating funds. Arizona's construction expenditures are high compared to other states, largely because our school-age population is growing quickly, and many schools are being built. Arizona ranked 19th nationally from 1995 to 2004, spending an average of $690 per student per year.

Like other states, Arizona's capital expenditures fluctuate dramatically from year to year

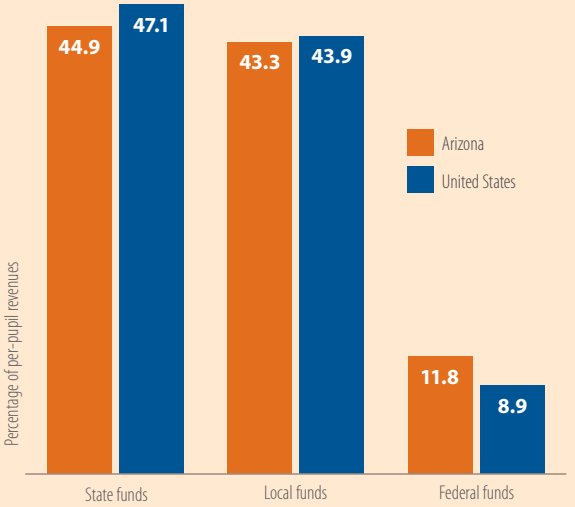
Construction expenditures per pupil, 2000–04



Source: *BEST,* Growth and Disparity: A Decade of U.S. Public School Construction 1995–2004, *October 2006 (uses only construction costs)*

State share of spending below average

Sources of school revenues, 2004–05



Source: *U.S. Census Bureau,* Public Education Finance 2005

Is our funding system equitable?

General state revenues and local property taxes make up the principal sources of public funds Arizona has available to spend on operating expenses. The state uses a formula that determines how much each district receives. More state funding goes to low-wealth districts, and less goes to high-wealth districts to balance their local spending ability. Adjustments are made to account for students with additional needs, such as special education students and English language learners, as well as for other cost factors, such as teacher experience levels, school size and grade levels; for instance, students in grades 8–12 receive more weighting and more funds than the lower grades, while a full-day or half-day kindergarten student is weighted at half as much as a 1st-grader.

Arizona created revenue control limits in the 1980s to ensure that all districts have about the same amount to spend per student. But the addition of new components within the revenue controls (covering items from transportation to teacher career ladders) and the ability to "override" the controls and raise additional local tax dollars have made it possible for some districts to raise and spend more money than others.

Funding gaps in Arizona are comparatively low, but significant

Even with these local overrides, the gap between the highest- and lowest-poverty districts in Arizona is low compared to other states: about $225 more per student in the low-poverty districts, compared to the national average of $825. While our funding gap is less than many states, $225 per student can add up: $90,000 for a school of 400 low-income students, or $337,500 for a larger school of 1,500 students.[4]

Moreover, unlike many states, Arizona does not provide an additional weight in the finance formula for low-income students, which could have a significant impact, given the state's high proportion of low-income students. Some argue that excessive attention to equity is misguided, especially if a priority is to steer *additional* resources to students who most need extra help.

Is our funding efficient?

Simply increasing spending in some general way is unlikely to boost outcomes. Nor is further equalizing spending. We need to spend wisely and be clear about what we will invest in and what results we will expect. To get there, we need a more transparent understanding of how funds are allocated and which spending produces the greatest returns.

Unfortunately, it is difficult to assess whether districts and schools are spending effectively. The "Dollars in the Classroom" report, produced annually by the state auditor general's office, found that classroom spending accounted for 58.4 percent of Arizona's local budgets over a five-year period, lower than the national average of 61.5 percent.

Arizona also is slightly below the national average in the percentage of spending on administrators and instructional support, but ahead in the percentage spent on support services staff (guidance counselors, speech therapists, special education resources).[5]

Arizona has advantages

Arizona also has assets for the support of schools that other states don't have, such as the State Trust Lands. Because the vast majority of Arizona is public land (83 percent) — including federal land that is not taxable — the Trust Lands were set aside in 1912 to help pay for education. The funds generated through the School Trust Lands (through sales, leases, interest, etc.) are used to help pay for education. The first $72 million in earnings in any given year goes into the general fund; the remaining money (estimated at $100.7 million for fiscal year 2008) is allocated to classrooms, largely for teacher compensation (base pay and pay for performance), class-size reduction, professional development and dropout prevention.[6]

School finance lawsuits: A mixed record

Because policymakers have failed to address the issue sufficiently, debates about the adequacy of school funding increasingly are being decided by courts — in Arizona and nationally. Arizona has had a mixed record.

In a landmark case in the 1990s (*Roosevelt Elementary School District No. 66 v. Bishop*), the court found that a lack of state spending on school construction was unfair to low-wealth school districts, and the case led to the development of a state school facilities board that now funds capital costs statewide rather than relying on local property taxes.[7]

On the other hand, a 2002 lawsuit (*Crane Elementary School District v. Arizona*) that sought extra funding for low-income and at-risk students who scored poorly on state tests was unsuccessful, and final appeals were dismissed in April 2007.

Meanwhile, in a long-running case that began in 1992 (*Flores v. Arizona*), the state was ordered in 2000 to increase funding for ELL programs and to determine the cost of effective ELL services. While additional funds have been provided by the legislature, the plaintiffs claimed successfully in 2006 that the state had not met its obligations. The case has been appealed.[8]

Another case under review by the courts (*Espinoza v. State of Arizona*) claims that the state's funding system "is arbitrary and not based on educational need." The plaintiffs asked to suspend the AIMS graduation tests because the state had failed to pay for programs to help poor, minority and limited English-speaking students. The case will go to trial in January 2008.[9]

Significantly, the proportion of spending in Arizona on plant operation/management and transportation also exceed national averages. Statewide averages mask significant differences in these costs among Arizona's diverse school districts. Because many of these "ancillary" activities (food, transportation, maintenance, etc.) become essentially fixed costs, they can consume substantially larger proportions of school budgets in smaller districts where economies of scale are not immediately available.

Where the money goes, five-year averages

	U.S.	Arizona
Classroom dollars	61.5%	58.4%
Plant operation/maintenance	9.6	11.5
Administration	11.0	9.7
Student support services	5.1	6.9
Instructional support services	4.7	4.4
Food service	3.9	4.7
Transportation	4.0	4.0
Other noninstructional services	0.2	0.2

Note: *U.S. averages for 2000–04, Arizona averages from 2002–06*
Sources: *Arizona Office of the Auditor General,* Dollars Spent in the Classroom, FY 2005, *May 2006*

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Spending is up steadily but not dramatically, essentially keeping pace with average increases nationally; the increase in teacher pay (in most districts) that resulted from Proposition 301 has helped to increase classroom-based funding.

If Arizona were to increase spending just to the national average of $8,701 per student, we would have an additional funding base of over $2 billion to spend,[10] more than enough to pay for the recommendations of the *Lead with Five* report, published by the Rodel Foundation of Arizona in 2004 to identify the five strategic investments proven to be successful in improving student achievement.[11]

Recommendations

Although too many of Arizona's current performance indicators reflect significant room for improvement, a critical mass of forces are aligning to strengthen the state's schools. The work of the Governor's P–20 Council to promote lifelong learning and align all elements of our educational systems, and the Superintendent of Public Instruction's recent announcement to increase instructional time and create individual graduation plans could pay significant dividends.

Building on this momentum, the Arizona Community Foundation and Ellis Center recommend additional actions in seven primary areas. New public investments likely will be required, but when spent well, the returns will make the quality of life and the strength of Arizona's economy the envy of the world. It is time to invest wisely, innovate courageously and fully embrace the notion that every young person, regardless of race, ethnicity or economic status, is important to our future and therefore worthy of these investments. Going forward, Arizona should:

1. Implement internationally competitive academic standards and comparably aligned curricula. Move from a system that advances students based on age and time spent to one in which demonstrated mastery of subject matter is the determining factor for promotion.
2. Refine and improve teacher preparation, and elevate the status and compensation of teachers. Link pay to performance, and provide relevant and effective professional development. Create pay differentials to attract teachers into high-needs districts and high-needs subjects.
3. Enhance the quality of training, and increase compensation for administrative leaders, from building principals to district superintendents.
4. Improve the quality of our state's charter schools through greater accountability and transparency.

5. Strengthen the school financing system by addressing demonstrated needs and insisting on measurable results. Creative approaches for allocating resources are needed, in particular, to ensure that students from low-income families receive greater support.

6. Create a needs-based tuition assistance program to dramatically increase the number of college students. Providing increased postsecondary opportunities is essential for the state to meet the increasing demands for a more highly educated workforce critical to the 21st century economy.

7. Develop common performance metrics from early childhood through postsecondary education to ensure that everyone is clear about expectations and held accountable for agreed-upon results. Such agreements are all the more important given the state's diffuse system of education governance.

Beginning with changes such as these, we can help our young people get the education that they deserve and that our state's well-being requires. We encourage Arizona's civic leaders, philanthropic community and general public to learn more about what is working well in education and also to ask questions about where we fall short and how we'll know when we're making progress.

Glossary

Academic Content Standards
Clearly defined statements and/or illustrations of what all students, teachers, schools and districts are expected to know and be able to do.

Academic Performance Standards
The state's determination of how well students must perform on tests of the standards.

Achievement Gap
The disparity in academic performance between groups of students. It is most often used to describe the performance gaps between many African-American and Hispanic students at the lower end of the performance scale and their non-Hispanic white peers, and the similar academic disparity between students from low-income and well-off families.

Adequacy
A legal determination of whether schools have sufficient funds to ensure that all but the most severely disabled students meet state and district academic standards.

Adequate Yearly Progress (AYP)
The measure by which schools, districts and states are held accountable for student performance under Title I of the No Child Left Behind Act of 2001. It includes separate measures for both reading/language arts and math and for students in four "subgroups": economically disadvantaged students, students from major racial and ethnic groups, students with disabilities, and students with limited English proficiency.

Advanced Placement (AP)
College-level course taught in high school using a standardized course syllabus aligned with the College Board Advanced Placement test for that course. Courses may be offered in any subject area approved by the College Board and in which the College Board offers a testing program. Course syllabi, including content, instructional materials and activities, are suggested by the College Board and are designed to prepare students for the AP exams at the end of each course. Earning qualifying scores on such exams may result in college credits being granted in those subject areas. However, this decision is made by the individual college. (www.collegeboard.com)

Arizona Early Education Funds (AEEF)
Established in 2005 at the Arizona Community Foundation, in conjunction with the Community Foundation for Southern Arizona and the United Way of Tucson and Southern Arizona, to help communities statewide build the quality and capacity of early childhood education programs for children from birth to age 5. (www.arizonaearlyeducationfunds.org)

Arizona's Instrument to Measure Standards (AIMS)
Students in grades 3–8 take the AIMS DPA (Dual Purpose Assessment). The AIMS DPA is a combination of AIMS criterion-referenced assessment questions developed by Arizona educators and based on the Arizona Academic Standards and questions from the Terra Nova, a national norm-referenced test created by CTB/McGraw-Hill. Students in grade 10 take the AIMS HS (High School) and continue to test twice annually in grades 11–12 until they have met or exceeded the standard in each area tested. The AIMS HS is a criterion-referenced test with questions developed by Arizona educators and based on the Arizona Academic Standards. It is an assessment of three content areas: writing, reading and mathematics. Scores are reported in the percentage of students falling into one of four performance categories (Falls Far Below Standards, Approaches, Meets, Exceeds). (www.ade.state.az.us/standards/aims/)

Capital Funds
Long-term investments in facilities. Funds are raised and allocated separately from operating funds.

Charter Schools
Nonsectarian public schools of choice, publicly funded and open to all students with no admission testing or screening. Each school has a charter, or performance contract, detailing its program, goals and methods of assessment. Charter schools operate with increased autonomy in exchange for accountability. They are accountable for both academic results and fiscal practices to several groups: the authorizer that grants the charter, the parents who choose to send their children and the public that funds them. (www.azcharters.org/)

Dual Enrollment
High school students can earn college credit either by enrolling in college-endorsed classes taught by their high school teachers at their regular schools, by taking classes on college campuses or through a distance-learning provider.

English Language Learner (ELL)
Students enrolled in U.S. schools who speak a language other than English and haven't yet mastered English. Also known as limited-English-proficient (LEP) students and students for whom English is a second language (ESL).

Equity
The fair distribution of funding, technology, facilities, services and equal educational opportunities for all students, regardless of race, ethnicity, poverty status, etc.

Graduation Rate
Though until recently states have used different indicators, a national consensus has emerged to measure the percentage of 9th grade students who earn a high school diploma within four years.

Head Start
A federal program, created in 1965, that provides economically disadvantaged preschoolers with education, nutrition, health and social services at special centers based in schools and community settings throughout the country.

Integrated Data to Enhance Arizona's Learning (IDEAL)
A Web-based portal of professional development resources for Arizona's teachers. (https://www.ideal.azed.gov/)

Leading Education through the Accountability and Results Notification System (AZ LEARNS)
The state's own accountability system and scorecard, which measures each school's progress based on students' AIMS test scores, year-to-year student gains on the AIMS tests or the graduation rate, and the federal Adequate Yearly Progress rating. (www.ade.az.gov/azlearns/)

Low-Income
Various federal measures to determine if students are impoverished, including: (a) "federal poverty level" (annual income below $17,170 for a family of three); (b) "low-income family" (annual income below $34,340 for a family of three); and (c) "free and reduced price lunch" indicates students eligible to participate in the federal school lunch program based on family income (set at 180 percent of the federal poverty level, or $30,306).

Magnet School
A school that places special emphasis on a particular schooling approach or field, such as science or the arts, designed to attract students from elsewhere in the school district.

National Assessment of Educational Progress (NAEP)
Known as "the nation's report card" and administered periodically by the U.S. Department of Education, the test measures performance of 4th, 8th and 12th grade students in reading, math, science, writing, history and geography. Of special importance are the state NAEP tests of a representative sample of each state's 4th- and 8th-graders in reading, math and science, which allow for state-by-state comparisons every two years. Unlike any other national exam, the state NAEP is required by federal law and is administered in the same way in every state. Scores are reported in two ways: scale scores and the percentage of students falling into one of four categories (Below Basic, Basic, Proficient, Advanced). (http://nces.ed.gov/nationsreportcard/)

No Child Left Behind (NCLB)
The 2001 federal law that reauthorized the Elementary and Secondary Education Act, drives most federal involvement in K–12 public education. Several measures are designed to improve student achievement and hold states and schools more accountable for student progress, including annual testing in reading and math; more support and choices for students in schools not making "Adequate Yearly Progress"; and public annual reports on the progress of all students groups. (www.nclb.gov)

Open Enrollment
A policy allowing students to transfer in and out of schools that have available space.

Operating Funds
The funds needed for day-to-day school operations, from salaries to textbooks to food service, mostly paid for by state and local governments.

P–20
The focus of the Governor's P–20 Council is to improve education in Arizona, as well as to ensure more students graduate from high school, succeed in college and are ready for the modern workforce by creating policies and practices designed to create a seamless system of education in which all levels of education — preschool through college — work together on behalf of student success. (www.governor.state.az.us/P20/)

Pay for Performance
Various plans pay teachers on the basis of their demonstrated competence in teaching or increase in student test scores, rather than on their number of years in the profession.

Pre-Kindergarten (also known as Preschool)
Programs of any type (private or public, full or part time) serving 3- and 4-year-old children.

Proposition 203 (First Things First/ Early Childhood Development and Health Board)
Passed by Arizona voters in 2006, a new tax on tobacco is raising an anticipated $150 million a year for health screenings and early childhood education. (www.azecdh.gov)

Proposition 301
Passed by Arizona voters in 2000, creates a six-tenths of 1 percent increase in the state's sales tax for 20 years earmarked for public education. The new tax was projected to add between $450 million and $780 million annually into the system. (www.ade.state.az.us/sais/prop301.asp)

Special Education (SPED)
Programs designed to serve children with mental and physical disabilities, who are entitled to individualized education plans that define the services needed and special needs to reach their educational goals, ranging from speech therapy to math tutoring.

State Trust Land
Revenues from the nearly 8.1 million acres of public land are used to help subsidize public education. (www.land.state.az.us.)

Teacher Alternative Certification
Allows teachers to bypass four-year undergraduate teacher education programs and earn their teaching certificates more quickly. Offered by most states.

Teacher Career Ladder Program
Arizona's performance-based compensation plan provides incentives to teachers in 28 districts, promotes and supports the professional development of teachers and requires a completely different way of evaluating and compensating teachers. Rather than advancing on a salary schedule as a result of seniority and educational credits, teachers are paid according to their level of skill attainment and demonstrated student academic progress.

Teacher Certification
The process by which teachers receive state permission to teach. States typically have minimum requirements, such as the completion of certain coursework and experience as a student teacher. Sometimes referred to as "licensure." (www.ade.az.gov/certification)

Teacher Certification Waiver
Granted by the state department of education to allow teachers to work without having completed a preparation program. Typically used to fill shortages in hard-to-staff subjects, such as math or science, or in high-poverty schools.

Teaching Out of Field
A teacher who is certified or on a waiver (see above) but teaching out of his or her subject area or field because no other certified teacher is available to teach that subject.

Terra Nova
The Terra Nova is a norm-referenced, standardized assessment created by CTB/McGraw-Hill and used by Arizona in grades 2 and 9 in reading/language arts, mathematics, science and social studies. A small number of Terra Nova questions also are added to the state's AIMS-DPA tests in grades 3–8. Individual student scores on the Terra Nova are reported relative to the U.S. norm on the test (established based on the scores of a national sample of students who took the test when it was developed in 2000). Scores are reported in terms of percentile ranks, with scores higher than the 50th percentile considered above average. While some districts or schools in every state use the test, only 11 states are known to use it in their statewide program. Not all of those states use the same version of the tests or administer them in exactly the same way so it is not possible to compare one state's results to another state. For more Terra Nova information or support, contact CTB/McGraw-Hill.

Trends in International Mathematics and Science Study (TIMSS)
An international test, given in 1995, 1999, 2003 and 2007, that compares the achievement of U.S. students to that of students in other countries. (http://nces.ed.gov/timss/)

Virtual School
Now operating in most states, students of all ages can do their coursework online.

Voucher
A document or chit, usually issued by the state, that parents can use to pay tuition at an out-of-district public school, a private school and/or a religious school.

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The Arizona Community Foundation (ACF) and its 13 affiliates are a statewide philanthropy and partnership of donors, staff, volunteers, nonprofit organizations and the community working together to empower and align philanthropic interests with community needs and build a legacy of giving. Founded in 1978, ACF manages 885 component funds, with endowment and trust assets exceeding $565 million. Individuals, families, organizations and businesses come to ACF to establish charitable funds that address the causes most important to them. Donor gifts are pooled and may be invested, earning returns that are used for grants and scholarships. Over time, the amount granted exceeds the original gift, while the fund balance remains intact. In fact, thanks to responsible investing, the fund balance continues to grow, generating funding for community needs in perpetuity. Funding is awarded year-round to a wide range of community organizations, educational institutions and government agencies. In 2006, ACF and its donors distributed $30.6 million, including nearly $4 million in scholarships. More information is available at www.azfoundation.org.

The Ellis Center for Educational Excellence was founded in 2006 with a bequest from the estate of John Ellis, a long-time ACF donor and benefactor. The mission of the Ellis Center is to promote comprehensive education improvement at the district level in Arizona. Partnerships will be formed with select K–12 districts to plan and implement systemic reform in key areas of education practice, including the institutionalization of higher academic expectations, improved alignment of standards, curriculum and assessment, teacher training, pedagogical innovation, school leadership development, parental and community engagement, better elementary, high school and college interface, and many other components of education "systems."

The goal of the Center is to demonstrate that by inculcating both an ethic and an infrastructure of continuous improvement in district-level education operations, tangible benefits can accrue, such as enhanced student achievement, higher retention and graduation rates, more college and technical school placements, and other measures of educational efficacy.

The Ellis Center will remain highly focused in both its grantmaking and capacity-building interventions.

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