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THINK NEW MEXICO

A Results-Oriented Think Tank Serving New Mexicans



Small Schools:

Tackling the Dropout Crisis While Saving Taxpayer Dollars



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About Think New Mexico

Think New Mexico is a results-oriented think tank serving the citizens of New Mexico. Our mission is to improve the quality of life for all New Mexicans, especially working low and middle-income families. We fulfill this mission by educating the public, the media and policymakers about some of the most serious problems facing New Mexico and by developing effective, comprehensive, sustainable solutions to those problems.

Our approach is to perform and publish sound, nonpartisan, independent research. Unlike many think tanks, Think New Mexico does not subscribe to any particular ideology. Instead, because New Mexico is at or near the bottom of so many national rankings, our focus is on promoting workable solutions. We use advocacy and, as a last resort, legal action in accordance with federal tax law.

Consistent with our nonpartisan approach, Think New Mexico's board is composed of Democrats, Independents, and Republicans. They are statesmen and stateswomen, who have no agenda other than to see New Mexico succeed. They are also the brain trust of this think tank.

Think New Mexico began its operations on January 1, 1999. It is a tax-exempt organization under section 501(c)(3) of the Internal Revenue Code. In order to maintain its independence, Think New Mexico does not accept government funding. However, contributions from individuals, businesses, and foundations are welcomed, encouraged, and tax-deductible.

Results

As a results-oriented think tank, Think New Mexico measures its success in changes we help to achieve in law or policy, such as:

- making full-day kindergarten accessible to every child in New Mexico
- repealing the state's regressive tax on food
- creating a Strategic Water Reserve to protect and restore New Mexico's rivers
- establishing New Mexico's first state-supported Individual Development Accounts to alleviate the state's persistent poverty
- reforming the state lottery to reduce its excessive operating costs and redirect the savings to full-tuition college scholarships

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Edward Archuleta, a 13th generation New Mexican, is a consultant and activist on issues including responsible land-use planning, growth management, and sustainable development. Edward previously served as the top assistant to former New Mexico Secretary of State Stephanie Gonzales.



Paul Bardacke served as Attorney General of New Mexico from 1983–1986. Paul was Chairman of Bill Richardson's successful gubernatorial campaigns. He is a Fellow in the American College of Trial Lawyers. Paul currently handles complex commercial litigation and mediation with the firm of Sutin, Thayer, and Browne.



David Buchholtz has advised more than a dozen Governors and Cabinet Secretaries of Economic Development on fiscal matters. David has served as Chairman of the Association of Commerce and Industry. He is the senior member of the New Mexico office of Brownstein Hyatt Farber Schreck.



Garrey Carruthers served as Governor of New Mexico from 1987–1990. Garrey is Dean of New Mexico State University's College of Business, and was formerly President and CEO of Cimarron Health Plan. He serves on the board of the Arrowhead economic development center in Las Cruces, as well as a number of other corporate and public boards.



Dr. F. Chris Garcia is a former President of the University of New Mexico and is currently a Distinguished Professor Emeritus of Political Science. He is the co-author of, among other books, *Hispanics and the U.S. Political System* and *Governing New Mexico*. Dr. Garcia recently received the Governor's Distinguished Public Service Award.



Elizabeth Gutierrez is the Director of Policy and Program Development for the New Mexico Higher Education Department. She holds a PhD in educational leadership and public policy. Liz was a marketing executive with IBM for nearly two decades. *She is on leave from Think New Mexico's board while she works for the state.*

LaDonna Harris is an enrolled member of the Comanche Nation. LaDonna is Chairman of the Board and Founder of Americans for Indian Opportunity. She is also a founder of the National Women's Political Caucus. LaDonna was a leader in the effort to return the Taos Blue Lake to Taos Pueblo.



Rebecca Koch is the owner of Rebecca Koch & Associates which provides management consulting services, development, and strategic planning for local and national nonprofits. Rebecca was the organizational development consultant for the Santa Fe Business Incubator, Inc. She is a former President of the Board of New Mexico Literary Arts.



Edward Lujan is the former CEO of Manuel Lujan Agencies, the largest privately owned insurance agency in New Mexico. Ed is a former Chairman of the National Hispanic Cultural Center of New Mexico, the Republican Party of New Mexico, and the New Mexico Economic Development Commission.



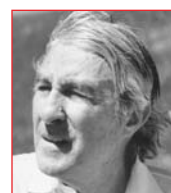
Fred Nathan founded Think New Mexico and is its Executive Director. Fred served as Special Counsel to New Mexico Attorney General Tom Udall. In that capacity, he was the architect of several successful legislative initiatives and was in charge of New Mexico's lawsuit against the tobacco industry.



Roberta Cooper Ramo is the first woman elected President of the American Bar Association, and in 2008 she became the first woman elected President of the American Law Institute. Roberta serves on the State Board of Finance and is a former President of the Board of Regents of the University of New Mexico. She is a shareholder in the Modrall law firm and serves on many national boards.



Stewart Udall served as Secretary of the Interior under Presidents Kennedy and Johnson. Prior to that, Stewart served three terms in Congress. He is the author of *The Quiet Crisis* (1963), which tells the story of human-kind's stewardship over the planet's resources, and *To the Inland Empire: Coronado and Our Spanish Legacy* (1987), which celebrates Hispanic contributions to our history.



Dear New Mexican:

This report was inspired in large part by students like America Enriquez, a sophomore at Amy Biehl High School in Albuquerque.



America transferred to Amy Biehl after failing her freshman year twice at a public high school of more than 1,500 students in Albuquerque. Since moving to Amy Biehl, where the total enrollment is fewer than 300 students, her grades have steadily improved and America is now in the top 10% of her class. She enjoys serving in the student government and hopes one day to attend the Air Force Academy and become a pilot.

At her former school, America says there were “too many students,” and it was easy for her to ditch school because the teachers were overwhelmed and no one noticed when she missed class. At Amy Biehl, America’s teachers have her cell phone number and if she is absent or late, America’s cell phone “blows up” with text messages from her teachers asking if she is ok. It helps that they have many fewer students to manage.

America also prefers the friendly atmosphere of Amy Biehl, where “everybody knows everybody.” At her former school, there were police officers with guns, “but even though there was lots of security, you didn’t feel safe.”

America Enriquez’s experience is emblematic of a pattern we found across New Mexico and public schools nationally: small schools tend to have higher graduation rates and higher student achievement—especially for low-income students like America—as well as less violence, more per capita extracurricular opportunities and greater satisfaction among students, teachers, principals and parents.

So why do we keep building large and, sometimes, “supersized” schools? As we explain later in this report, much of it can be traced back to the 1940s and 1950s when the emphasis was on economic efficiency, rather

than educational results. That thinking has persisted even as graduation rates and student performance have declined and incidents of violence have continued to grow. Now new research indicates that large schools exhibit “diseconomies of scale,” meaning that they are more expensive to operate and that small schools are more cost-effective at producing graduates.

As we observed in our successful fight for full-day kindergarten, sometimes there is a long time-lag between when the research determines what is in the best interests of children and when it finally gets translated into policy.

In preparing this report, we reviewed mountains of studies, journal articles and government reports, and compared them to the data we gathered and compiled on New Mexico’s graduation rates, student performance, and school size. Our findings were cross-checked against the experiences of the students, parents, teachers, principals, administrators, and school board members with whom we consulted.

Two interns provided enormous help with this research: Maclovía Quintana of Pojoaque, a sophomore at Yale, and Jacob Candelaria from the San Jose barrio in Albuquerque, who is a senior at Princeton. In addition, with this report, we welcome our new Field Director, Demetrius Moreno of Artesia, New Mexico, and welcome back Kristina Fisher, our Associate Director, who graduated first in her law school class at the University of New Mexico in May with the highest grade point average in the school’s history.

If you would like to become part of this initiative to create better opportunities for students like America Enriquez by building smaller public schools in New Mexico, rather than supersized dropout factories, then I encourage you to visit our website at www.thinknewmexico.org. You are also invited to join the hundreds of New Mexicans who invest in Think New Mexico’s work each year by sending a contribution in the enclosed reply envelope.

Fred Nathan

Founder and Executive Director

Think New Mexico



Lynne Loucks Buchen
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Jacob Candelaria
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Kristina Gray Fisher
Associate Director



Demetrius Moreno
Field Director



Fred Nathan
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Maclovía Quintana
Intern

THE DROPOUT CRISIS IN NEW MEXICO

An average of 77 students drop out each school day across New Mexico. That means a student drops out of a New Mexico high school just about every five minutes of every school day. Altogether, nearly 14,000 New Mexico high school students drop out each year—roughly the entire undergraduate population at the University of New Mexico.

Tragically, New Mexico's graduation rate ranks second from the bottom of the 50 states and the District of Columbia, according to *Diplomas Count* 2008, a comprehensive analysis of public high school graduation rates performed by *Education Week*, a newspaper for educators.

That ranking, which came out in June 2008, went largely unreported locally. It reveals that only slightly more than half (54.1%) of New Mexico's students graduate from high school, compared with a national average of 70.6%.

Education Week used 2005 data, the most recent that was available, to calculate the graduation rate. Its calculation was based on the percentage of high school *freshmen* who earn a diploma at the end of four years.

Meanwhile, New Mexico's Public Education Department (PED), with the consent of the U.S. Department of Education, has been calculating and reporting graduation rates based on the percentage of high school *seniors* who earn a diploma by the end of the year. The *New York Times*, in an article about how states obscure true graduation rates, singled out New Mexico's method of calculating the dropout rate and said that it "grossly undercounts dropouts by ignoring all students who leave before the 12th grade." Thus, PED reported New Mexico's graduation rate at

Graduation Rate by State			
STATE	GRAD RATE	STATE	GRAD RATE
New Jersey	83.3%	Virginia	72.9%
Iowa	82.8%	West Virginia	72.8%
Wisconsin	80.5%	Kentucky	71.5%
Pennsylvania	80.4%	Rhode Island	71.1%
Vermont	80.2%	Oklahoma	70.8%
Nebraska	79.6%	U.S. Average	70.6%
North Dakota	79.2%	Michigan	70.5%
Utah	78.6%	Oregon	70.4%
Minnesota	78.1%	California	70.1%
Connecticut	78.1%	Washington	68.8%
Maine	77.2%	Texas	68.5%
New Hampshire	77.1%	New York	68.0%
Illinois	76.7%	Alaska	67.6%
Idaho	76.6%	Hawaii	67.4%
Missouri	76.5%	North Carolina	67.0%
Ohio	75.9%	Tennessee	65.4%
Montana	75.7%	Mississippi	61.8%
South Dakota	75.6%	Alabama	61.3%
Massachusetts	74.7%	Florida	60.8%
Kansas	74.3%	Delaware	60.1%
Wyoming	74.2%	Georgia	58.1%
Colorado	74.2%	D.C.	57.6%
Maryland	73.6%	South Carolina	55.6%
Indiana	73.6%	Louisiana	54.7%
Arizona	73.3%	New Mexico	54.1%
Arkansas	73.2%	Nevada	45.4%

Source: *Education Week*, "Diplomas Count," June 2008.

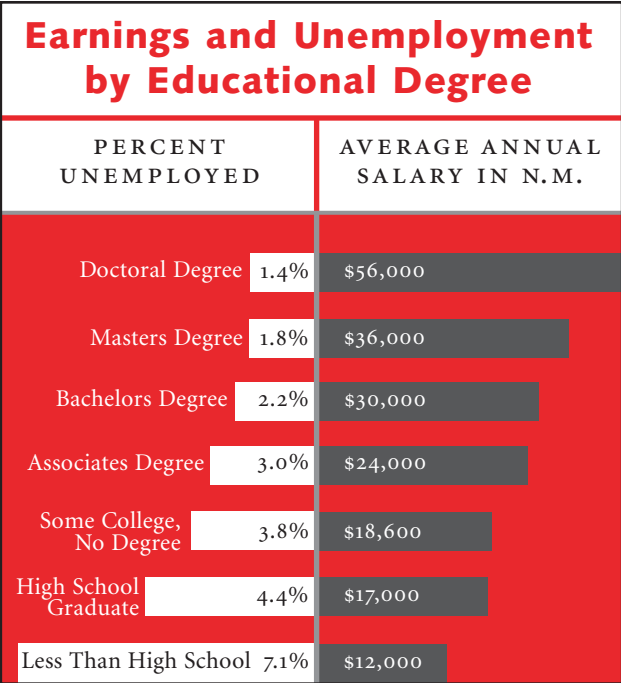
85% for 2005, the same year as *Education Week* reported it at 54.1%—a gap of more than 30%.

Thankfully, PED Secretary Veronica Garcia has announced that, in the future, New Mexico will report graduation rates based on entering freshman, not entering seniors. She says that some school districts will be in for a "rude awakening" because the old

method for calculating dropouts had given the districts “a false sense of accomplishment.”

It has also kept the public and policymakers in the dark about the extent of a problem that is truly a crisis. Of all the many rankings in which New Mexico needs to improve, our high school graduation rate is one of the most urgent.

It is urgent because New Mexico’s economy increasingly depends on producing more high school graduates. According to the state Higher Education Department, 67% of new jobs require at least some college, which in turn requires a high school degree. Yet New Mexico is ranked 5th in the nation for the percentage of adults aged 25 to 64 with less than a high school diploma. This has serious implications for New Mexico’s ability to retain growing businesses and attract new ones.



Source: Bureau of Labor Statistics, “Education Pays,” April 2008; U.S. Census Bureau, “5% Public Use Microdata Samples,” 2000.

Our high dropout rate impacts every New Mexico taxpayer. A conservative estimate, based on a study conducted by the Friedman Foundation in North Carolina, indicates that each dropout from the class of 2007 will cost New Mexico taxpayers about \$4,437, or a total of about \$62 million this year, due to increased incarceration costs, increased Medicaid costs, and loss of tax revenue related to lower earnings. These costs, of course, will be repeated every year of the dropouts’ expected lifetimes.

High school dropouts themselves face a bleak future of little to no opportunity. As the accompanying chart illustrates, their incomes are far lower than those of high school and college graduates, and they suffer far higher rates of unemployment.

Now that we finally have an accurate accounting of the depth of the challenge, we can work to address it. No silver bullet exists, but many of the problems that lead students to drop out—from alienation to violence in schools—can be traced to the size of the schools themselves, which are increasingly large and impersonal. A growing body of local and national evidence, detailed in this report, has found that smaller schools—defined here as fewer than 900 students for high schools—have dramatically better graduation rates. Yet, more than two-thirds of New Mexico ninth graders last year entered high schools with populations larger than 1,000 students, and nearly a third entered high schools with more than 2,000 students. Unfortunately, these large schools are many times better at producing anonymity, alienation, and dropouts than high school graduates.

A HISTORY: THE GROWTH OF SCHOOL SIZE IN NEW MEXICO

In 1875, there were only 138 schools with 147 teachers in the entire territory of New Mexico, according to S.P. Nanninga's book, "The New Mexico School System." At statehood in 1912, New Mexico continued to be, like most states, a state of small schools by necessity, many of them one-room schoolhouses with a single teacher. The growth of these early schools seemed to follow New Mexico's motto, "it grows as it goes" (*Crescit Eundo*).

By 1920, there were nearly 1,500 public schools serving about 80,000 students, according to that year's Annual Report of the State Superintendent of Public Instruction. Fast-forward to 2008 and, as shown in the chart on the facing page, New Mexico has about half the number of public schools as in 1920, but four times the number of students.

The decline in the number of public schools and their transformation into very large institutions to accommodate an expanding population closely parallels the thinking at the time about mass production. Typical of this era was Nanninga, who was Dean of the College of Education at the University of New Mexico. In his history of the public schools, written in 1942, Nanninga states, "New Mexico, as one of the sparsely settled states, labors under the disadvantage of relatively high unit costs. Mass education due to density of population, like mass production in industry, enables a state to improve quality or reduce costs, or both."

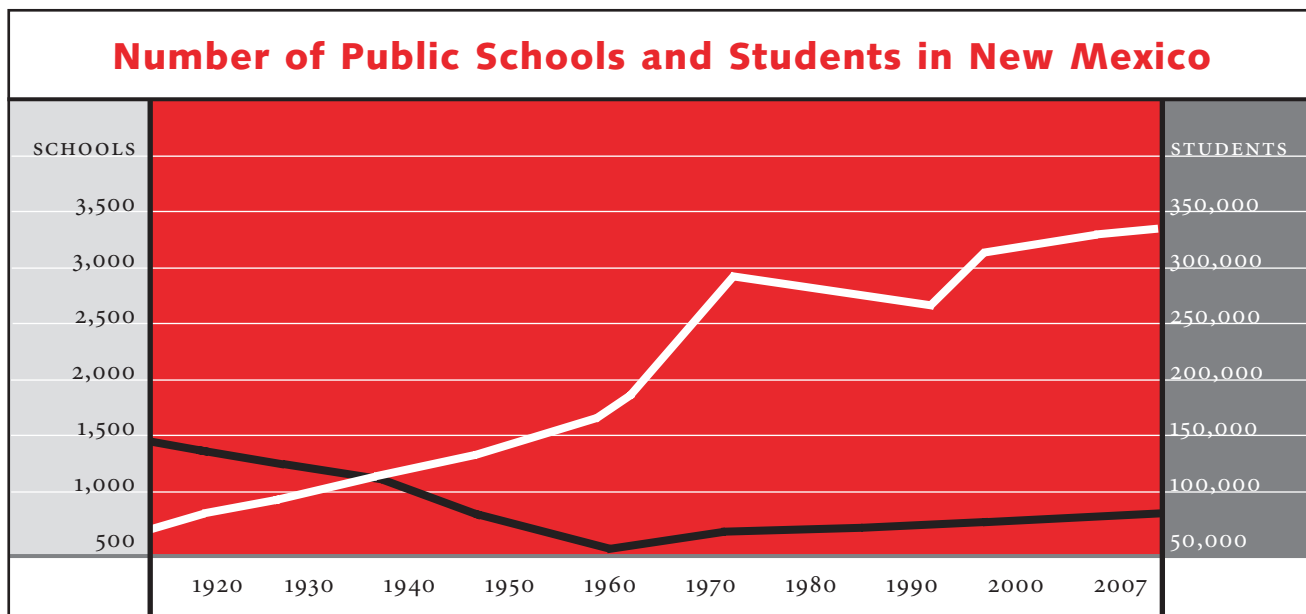
This statement came at the beginning of a period stretching from about 1939 to 1968 when there



One-room schoolhouse at the base of Black Mesa, south of La Mesilla, New Mexico, 1970. Photo by Bob Harper, Courtesy Kay Harper.

was a rapid consolidation of the number of schools, both in New Mexico and across the nation. During this period, the number of schools in New Mexico declined more than 42% from 1,143 to 659, yet the school enrollment population grew by 117%.

The model of the student as a "unit" or widget and the school as a factory, as well as the trend toward eliminating smaller schools, accelerated nationally with the 1959 publication of an influential and best-selling book by Dr. James Bryant Conant, a former President of Harvard University. "The American High School Today" blamed the nation's perceived defeat in the space race in 1957 (when the Soviets launched Sputnik) on the nation's high schools. He was particularly critical of small rural high schools and their lack of re-



*Sources: State of New Mexico Public Education Department and New Mexico State Archives, Department of Education Records.
Compiled by Think New Mexico.*

sources to adequately teach science. Thus, the book contains chapters with titles such as, “Elimination of the Small High School—A Top Priority.” Conant’s focus, unfortunately, was on resources and efficiency, rather than results. He warned that small high schools represent “one of the serious obstacles to good secondary education.”

Ironically, New Mexico adopted this factory model for its school system, pushed by Nanninga, Conant, and others, even though the state essentially skipped the industrial revolution and moved from an agricultural economy to a service economy without ever building many actual factories.

In 1983, as the national manufacturing sector was beginning a long decline and the need for low-skilled workers was shrinking while businesses complained of a lack of highly skilled workers, a federal education panel issued “A Nation at Risk,” which

warned of a “rising tide of mediocrity” in the public schools.

In the search for solutions, small schools, long criticized as relics and impediments to school reform, were now suddenly being hailed as part of the solution to improving the nation’s public education. A number of scholarly studies in the latter half of the 1980s demonstrated that, as school size increases beyond a certain point, student performance decreases, particularly among students of low socioeconomic status.

By 1996, the National Association of Secondary School Principals (NASSP) had formally rejected Conant’s conclusions in a report called “Breaking Ranks: Changing an American Institution.” The NASSP concluded that “high schools must break into units of no more than 600 students so that teachers and students can get to know each other better.”



Columbine High School, enrollment 1,965 students.

Photo by Ed Andrieski, Courtesy Associated Press Images.

Then, in 1999, two students at Columbine High School in Colorado, which had an enrollment of 1,965 students, embarked on a shooting rampage and killed a dozen students and a teacher before killing themselves. It remains to this day the deadliest high school massacre in the nation's history. Many believe that the school's size was a contributing factor in that tragedy. For example, a month after the killings, the *Los Angeles Times* published an article entitled "Smaller Schools Called Antidote to Alienation." It was typical of the chorus of criticism aimed at jumbo high schools: "Increasingly, many conclude that they are breeding grounds for violence, dropouts, academic mediocrity and the sort of alienation that is widely believed to have led to the massacre at Columbine High School."

By 2000, many school systems across the nation were embracing the smaller school movement by building new schools "on a human scale," and dividing existing mega-schools into separate "schools within schools." The early results have been positive: higher attendance rates, higher student achievement (particularly among low-income students), and higher graduation rates, along with many fewer violent incidents.

Meanwhile, New Mexico has been slow to abandon the factory model, instead clinging to the entrenched and mistaken notion that the manufacturing sector's economies of scale can somehow apply to the education of human beings. For example, Albuquerque Public Schools, the largest school district in the state, has required since at least 1999 that communities must have at least 1,500 students before a new high school will be built. In addition, the district notes on its website that its prototype elementary school is designed to serve 650 students. These numbers are more than 50% larger than the maximum effective sizes for high schools and elementary schools, respectively.

In 2007, New Mexico taxpayers spent \$190.3 million (along with millions more at the local level) to subsidize school construction and capital projects, according to the Public School Capital Outlay Council. Sixty percent of that went to oversized facilities based on the factory model.

The time has come to stop building supersized schools in New Mexico and start building smaller schools and establishing smaller learning communities in our existing large schools.

ADVANTAGES OF SMALL SCHOOLS

Higher Graduation Rates

In 2006, the Gates Foundation funded an extensive study in which high school dropouts in 25 communities across the country were interviewed about why they had dropped out of school.

A recurring theme was what the study's authors termed "a lack of connection to the school environment," with students feeling bored and disengaged. The dropouts told the researchers they felt that they "didn't belong" at school and that they didn't feel safe there.



Students in Silver City, N.M., circa 1889–1892. Photo by Rev. Ruben Edward Pierce, Courtesy Palace of the Governors (MNM/DCA), #93777.

Well over a third of the dropouts interviewed said that there was not a single teacher or staff member at school who cared personally about their success, or whom they could talk to about their struggles.

Small schools work because they directly counteract this alienation, isolation, and disconnection. Over the past three decades, the trickle of studies heralding the superiority of small schools has turned into a flood. In 1996, education researcher Kathleen Cotton analyzed 103 studies of school size conducted between 1978–1993, and published her conclusions in a paper titled "School Size, School Climate, and Student Performance."

Sorting through the mountain of data, Cotton discovered that it overwhelmingly favored small schools. Nine of ten studies focusing on the relationship between school size and dropout rates concluded that smaller schools were far more successful at graduating their students.

More recently, when Cincinnati, Ohio established a series of small high schools to replace several large, underperforming large ones, they saw the four-year graduation rate rise dramatically from 51% at the large schools to 79% in the small schools between 2000 and 2006.

The same pattern holds true in New Mexico. Think New Mexico calculated the persistence rates for the Class of 2007 in New Mexico's public high schools (comparing the number of freshmen entering in 2003 with the number of seniors graduating in 2007), and found that schools with 500–1,000 students had the lowest dropout rate: 31.7%.

Higher Student Achievement

School size also directly affects student achievement. While studies of student achievement have consistently found that socioeconomic status plays a larger role than any other factor in determining student success, they have also found that school size plays an important part. A study of 293 public high schools in New Jersey by a researcher from the National Center for Education Statistics found that, after socioeconomic status, school size was the best predictor of both graduation rates and student performance on achievement tests.

In fact, small schools can even counterbalance some of the negative effects of an impoverished background. A 2000 study of school size and student achievement in approximately 13,600 elementary and secondary schools across Georgia, Montana, Ohio, and Texas found that school size has an even more profound effect on the achievement of low-income students than it does

on middle or higher-income students. Some of the most striking results were that, in schools serving predominantly low-income children, students in small schools scored higher than students in large schools on 80% of the assessment tests given in Texas, and over 90% of the tests given in Georgia.

In other words, these findings show that small schools help to level the playing field, enabling low-income students to succeed at the same levels as students from more privileged backgrounds. Small schools therefore have the potential to narrow the persistent achievement gap that has plagued New Mexico's schools. Several of the researchers involved in the school size studies concluded that, "the basic principle [is] that the poorer the community, the smaller the schools should be." Given New Mexico's ranking as 3rd highest in the nation for the percentage of children living in poverty (24% in 2007 according to the U.S. Census), these findings have particular importance for our state's children.



Students crowd the halls in a New Jersey school, enrollment 5,000, September 2007. Photo by Mike Derer, Associated Press Images, #0709250119995.

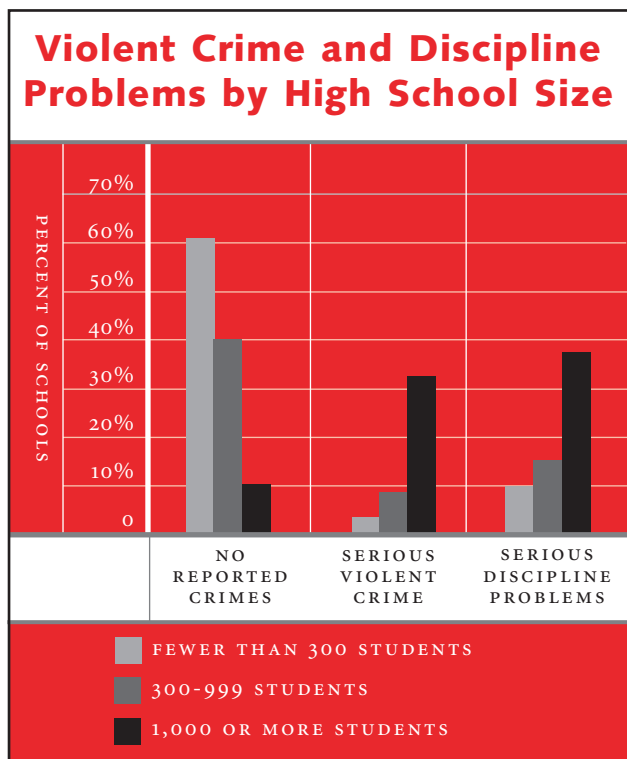
Greater Safety

Part of the reason small schools improve graduation rates and student achievement is that small schools experience substantially less violence, crime, and classroom disruption. As the Columbine tragedy epitomized, large schools breed alienation and anonymity among students, which often leads to anger, frustration, and violence. Respected four-term North Carolina Governor Jim Hunt has summed up the problem: "One of the key issues that I believe affects safety and the whole educational enterprise is the size of our schools. This is an area where we have made terrible mistakes...Too many schools are just too big."

A report by the U.S. Department of Education on violence and discipline problems in the public schools illustrates the stark differences between small and large schools. As illustrated in the accompanying chart, the agency found that "thirty-three percent of schools with 1,000 or more students experienced a serious violent crime compared with 4 to 9 percent in small and medium-sized schools."

Here in New Mexico, the ominous consequences of oversized schools could be seen in September 2007, when the board of Albuquerque Public Schools (APS), the state's largest school district and home to many of its largest schools, voted to allow APS security guards to carry loaded guns on their patrols during school hours. The decision came partly in response to the fact that 12 guns had been seized at high schools and middle schools in the district in 2006, triple the number discovered in APS schools the year before.

By contrast, a 2000 study by the Bank Street College of Education found that students in



Source: U.S. Department of Education, "Violence & Discipline Problems in U.S. Public Schools," 1998.

Chicago schools enrolling 200–400 students knew each other better, and as a result, fought far less frequently than their peers in larger schools in the city. These same students had higher grade point averages, higher achievement test scores, higher attendance rates, and lower dropout rates than their peers in larger schools.

As former New York City high school principal Deborah Meier put it: "Small schools offer what metal detectors and guards cannot: the safety and security of being where you are known well by people who care for you."

More Extracurricular Opportunities

Another aspect of small schools that enhances student success is that students at smaller schools are significantly more likely to participate in extracurricular activities such as sports, clubs, and student government. They are also more likely to hold leadership positions in those groups. The reason for this is simple: in a small school, fewer students are competing for positions and every student is needed for these activities to occur.

Although it might seem at first glance that a larger school could support a wider variety of activities, the research in Cotton's analysis demonstrated that extracurricular opportunities expand much more slowly than student population. One study found that, as the population of a school increases twenty times, the opportunities for participation in extracurricular activities increase only five times, making many more students "redundant" and denying them the opportunities that small schools provide for leadership training and building connections with peers, teachers, and mentors.

Greater Stakeholder Satisfaction

Finally, small schools are overwhelmingly preferred by the stakeholders who are most closely affected: teachers, students, principals, and parents.

Surveys of teachers in large and small schools have found that teachers at small schools are more satisfied with their jobs, are absent less frequently, and have higher morale. Because teachers at small schools see fewer students each day, they are better able to get to know those students individually and collaborate with their peers to tailor educational plans to reach every student.

As Tori Stephens-Shauger, a teacher at Amy Biehl High School in Albuquerque, enrollment 280, puts it: "[At Amy Biehl] I know the students I teach. I know who they are and how they learn.... When I was teaching at my previous [large] school, I had no time to understand my students.... I could barely remember their names and the school's focus was not on the teaching and learning of our students, but on bureaucratic concerns."

Like teachers, students are generally happier in smaller schools. A series of studies over the past two decades has found that students in smaller schools have more positive attitudes toward school.

Principals were some of the early leaders in championing small schools, as mentioned earlier, with the National Association of Secondary School Principals announcing in 1996 that one of its top priorities for school reform was limiting high schools to units of no more than 600 students.

Parents are likely the most passionate advocates of small schools. In a nationwide 2002 study, parents of children at smaller schools reported higher academic standards and student achievement, and fewer problems of overcrowding, disrespectful language and behavior, bullying and harassment, alienation, isolation, and students falling through the cracks and dropping out.

Indeed, this helps explain the growing popularity of charter schools. A 1997 survey of parents whose children attended charter schools found that 53% of parents had chosen these schools because of their small size. This was the single most important factor leading parents to choose charter schools, ahead of higher academic standards, educational philosophy, parental involvement, and teacher quality.

SOLUTIONS

Stop Building Dropout Factories

The May 17, 2008, cover story of *Newsweek* listed the top 100 high schools in the U.S. under the banner headline, “Small Schools Rising.” Nearly a quarter of the top 100 schools had graduating classes of fewer than 100 students.

The data makes it clear that one key piece of improving education in New Mexico is to stop building oversized schools and instead build smaller ones in which students can thrive. To achieve this, we propose that the state set maximum enrollments for new or consolidated public elementary and secondary schools in New Mexico.

Specifically, we propose to limit new high schools

to no more than 225 students per grade, new middle schools to no more than 120 students per grade, and new elementary schools to no more than 60 students per grade.

Currently, new schools are funded by both local communities and by the state through the Public School Capital Outlay Council. Think New Mexico recommends enacting legislation requiring that for a proposed new school to qualify for state capital funds, it must adhere to these size limits.

Under this system, a standard high school of ninth through twelfth grade would not exceed 900 students. We believe that this makes sense as a maximum size limit because researchers, such as Professor Valerie Lee of the University of Michigan, have consistently found that students do best in high schools of 600–900 students.



Children playing in a schoolyard in Picacho, N.M., circa 1915. Photo Courtesy Palace of the Governors (MNM/DCA), #1374.

The Education Commission of the States reached a similar conclusion, stating in a 1999 report: “While there is no agreement about what school size is ideal, the consensus of researchers is that no school should serve more than 1,000 students and that elementary schools should not exceed 300 to 400 students. There is also general acknowledgment that the huge 2,000, 3,000 and 4,000 student schools now in use are much too large.”

The new small high schools supported by the Gates Foundation enroll substantially fewer students, an average of only 150 per grade level. However, setting the cap at 225 per high school class provides schools and school districts with the greatest possible flexibility to tailor new schools to fit the needs of their communities, while still keeping them from growing to a size that the evidence shows is too large for any school.

While this report has focused primarily on high schools, it is crucial to include middle and elementary schools in the solution as well, as they lay the foundation for success or failure in the high school years.

Although they are rarely counted in any official measures, some students drop out of school altogether in seventh or eighth grade. Even for those who do not, a University of California researcher has found that students who attend large middle schools are more likely than those who attend small middle schools to drop out in ninth or tenth grade.

In the late 1990s, the University of New Mexico conducted a study in which two sets of former public school students were interviewed: first, a group that had dropped out or ended up in juvenile detention, and second, a group that had successfully graduated from high school. Both groups



Sixth through eighth grades, Bernalillo Public School, circa 1925.
Photo by William Walton, Courtesy Palace of the Governors (MNM/DCA), #994.

reported that middle school had been the most difficult period of their schooling. The successful students had managed to overcome the challenges, but the students who dropped out or got into trouble pointed to their middle school years as the time when they had lost their way.

Elementary schools, like middle and high schools, have increased in size as the factory model has gained popularity. Here, too, numerous studies have shown that small elementary schools are better than large ones at teaching children the crucial skills they need to succeed in middle school, high school, and beyond—most fundamentally, basic math and reading skills.

For example, fourth graders in elementary schools with more than 800 students scored 28% lower on standardized math tests than students in schools with fewer students, according to a national study conducted by researchers at the University of Oregon. Similarly, a study of third graders in over 4,000 California elementary schools found that the most effective schools serving high-poverty populations were those with enrollments below 200 students.

Schools Within Schools

Capping the size of new schools will help students going forward. To help students who are currently trapped in New Mexico's existing oversized high schools, Think New Mexico proposes to reduce the scale of education by creating separate schools within schools or smaller learning communities.

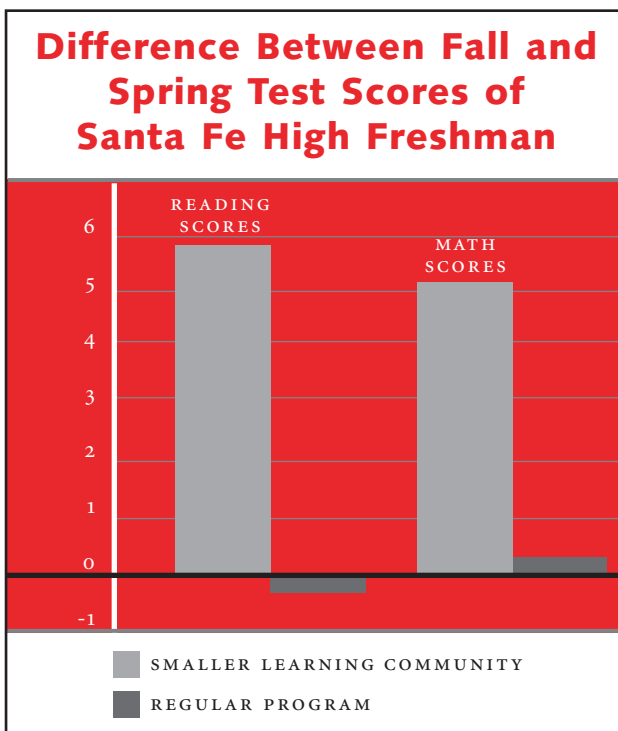
When New York City, plagued with dropout rates as high as New Mexico's, recently embarked on a comprehensive effort to establish smaller "schools within schools," the initial results were remarkable. Graduation rates rose to an average of 73% in the restructured schools from 31–51% at the schools they replaced. One enormous school, which had enrolled 3,300 students and graduated only 31% of them, was split into three smaller schools that graduated 80% of their students.

Despite success stories like New York City's, a 2008 report by the U.S. Department of Education concluded that the results of schools within schools and smaller learning communities have been somewhat more mixed than those of small schools. The study found that smaller learning communities did not lead to a significant improvement in standardized test scores—although they did decrease the rate of violent incidents and increase the percentages of students who were promoted from ninth to tenth grade, who participated in extracurricular activities, and who planned to attend college. The bottom line appears to be that while it helps to split large schools into smaller communities, doing so is not as effective as simply building smaller schools. However, these reforms can make a positive difference for existing large schools in New Mexico.

In 2004–2005, Santa Fe High School launched a Smaller Learning Communities (SLC) pilot program,

starting with a team of five teachers and 115 freshmen. Each teacher taught one of five core subjects (English, math, science, social studies, and art), and was also responsible for a homeroom of about 25 students. The schedule set aside time each week for the teachers to collaborate on an integrated curriculum and personalized instruction for their students.

At the end of the year, the test scores of freshmen in the regular Santa Fe High program had remained stagnant in math and actually decreased in reading, while the scores of the SLC students had increased by more than a grade level and a half. This was particularly dramatic since, in the initial tests, the overall performance level of the SLC students had been lower than that of the other freshmen.



Source: Measures of Academic Progress (MAPS) test scores for Santa Fe High School Freshmen, 2004–2005.

The most powerful results were seen in the most at-risk student groups. Low-income students, special education students, and English language learners in the SLC all made significant progress, while their peers in the regular program lost ground. The Santa Fe School District has since been awarded a \$1.6 million federal grant to expand the program to all students at Santa Fe High and Capital High School.

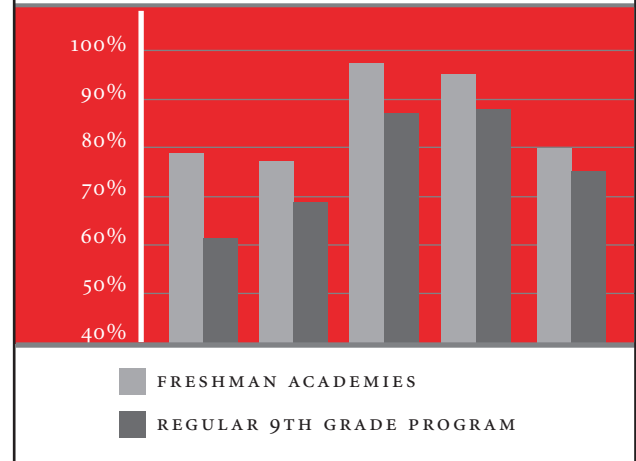
Similarly, Albuquerque Public Schools (APS) has received multiple federal grants to begin establishing smaller learning communities in its own oversized high schools. In 2000, the school district used a \$4.3 million federal grant to institute “freshman academies,” which grouped ninth graders into communities of no more than 120 students in five schools.

A 2005 evaluation of the APS freshman academies found that the students participating in them reported feeling safer, happier, and more engaged in school. Attendance was higher and the dropout rate was significantly lower than in the standard ninth grade program. The percentage of students successfully advancing to tenth grade increased at each of the freshman academies, soaring by 17% in a school where only 62% of the freshmen in the regular program earned enough credits to advance to the sophomore level. In 2008, APS received \$9.1 million dollars to expand its freshman academies to seven of its largest high schools.

Other innovative alternatives for decreasing the size of existing large schools include implementing trimester schedules, with one-third of the students off each term, or opening satellite campuses such as the early college high school being established on the campus of New Mexico State University.

Think New Mexico proposes to require every large high school serving at-risk student populations to implement some form of smaller learning communities by the 2010–2011 school year.

APS Students Advancing to 10th Grade in Five Schools with Freshman Academies



Source: Debra Heath for APS, “Evaluation Brief: Small Learning Communities 2000–2003,” December 2005.

To fund the transition from the status quo to this more effective model, Think New Mexico proposes to amend the current public school funding formula, which provides schools with additional funds if they have higher at-risk student populations.

The evidence is clear that the most effective way to serve these students is by making the learning environment smaller, so we would require the schools receiving these funds to implement smaller learning communities. The at-risk factor currently generates about \$81.4 million per year.

To supplement these state dollars, we strongly encourage New Mexico’s large schools to take advantage of the more than \$93.5 million in federal funding currently available for any school district interested in implementing smaller learning communities in its schools. Several private foundations have also provided millions of dollars to schools and school districts to implement these reforms.

THE MYTH OF ECONOMIES OF SCALE

Although the original driving force behind super-sized public schools was to achieve economies of scale, this theoretical advantage is not supported by the research. Instead, studies have consistently found that large schools exhibit diseconomies of scale: inefficiencies and increased costs that result from increases in administrative bureaucracy, security costs, and transportation costs.

Operational Costs

In 1992, the Public Education Association of New York produced a report in which it examined all the existing research on school size and operational costs and concluded that, “The premise that small schools are more expensive to operate has always been false.” Instead, the research—consisting of more than 30 studies in urban, rural, and subur-

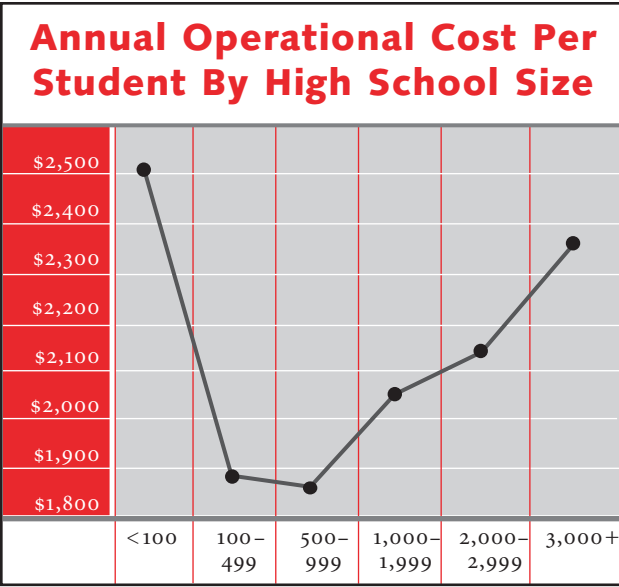
ban schools in every region of the country—showed that operational costs follow a U-shaped curve. The most efficient high schools are those with enrollments of between 300–900 students.

The reason that large schools are more expensive is that, as the Public Education Association put it, they are “difficult to manage efficiently and safely.” Management costs increase dramatically because of the need for additional administrators (assistant principals, department heads, program supervisors), support staff (secretaries and clerical workers), and security personnel (officers, dispatchers, and supervisors).

For this reason, a 2005 study funded by the Gates Foundation, which examined 25 high-performing small schools across the nation, found that they not only achieved better student outcomes but also spent an average of 17% less per student than the per pupil expenditures for their districts.

The facts on the ground in New Mexico are consistent with this pattern. In 2004, for example, to keep the peace in its oversized schools, APS School Police Services employed 62 people, at an annual cost of over \$1.4 million. This does not include the additional security costs of metal detectors, surveillance cameras, and weapons.

Transportation is another large and rapidly growing cost of oversized schools. Because large schools tend to be centralized, drawing in students from a large area, more fuel is required to transport the students to school. In August of 2008, the New Mexico Legislature made an emergency appropriation of \$4 million to keep New Mexico’s school buses running as the cost of fuel reached record highs. Other states are consider-



Source: Public Education Association of New York, “Small Schools Operating Costs: Reversing Assumptions About Economies of Scale,” December 1992.

ing steps as drastic as four-day school weeks in order to save money on transportation.

Even in those instances where small schools have cost more to operate than large schools, their superior performance has meant that they are less costly if the price is calculated per *graduate* rather than per *student*.

A 2000 study comparing the cost and performance of New York City's large and small schools found that although high schools with fewer than 600 students cost about \$800 more per student per year than those with 600–2,000 students, the small schools cost \$3,300 less per graduate, because the dropout rate was more than twice as high at the larger schools. If graduates are what we desire our schools to produce, then small schools do so more effectively and at a lower cost.

Capital Costs

Although operational costs are demonstrably lower in small schools, it might be argued that one-time capital construction costs are higher to build multiple small schools rather than fewer, supersized ones. However, this is true only if small schools attempt to duplicate the existing physical structure and facilities of large schools.

For a concrete example of an alternative, and far more economical approach, one need only visit Amy Biehl High School, a 280-student charter school in Albuquerque. As Senator Jerry Ortiz y Pino of Albuquerque noted in a 2005 opinion editorial, Amy Biehl's capital costs totaled less than \$17,000 per student, while construction costs for two 2,500-student high schools then being built by APS ran to approximately \$40,000 per student.

Amy Biehl High School accomplished these savings by taking advantage of community educational resources. Instead of building its own gymnasium, swimming pool, library, and theater, the school established partnerships with the public library, a local dance studio, community center, cultural center, parks, museums, and other community resources. This not only saves taxpayer dollars in school construction and maintenance, but also enriches students' learning experiences by moving them out into the community where they interact with adult mentors and role models.

While Amy Biehl invested its capital in renovating an existing building, Monte del Sol Charter School in Santa Fe took a similar approach in building a facility from scratch, making use of community educational resources like the Santa Fe Community College and the Genoveva Chavez Community Center. As a result, Monte del Sol's construction costs total approximately \$19,400 per student. Even with today's higher construction costs, this strategy yields a price tag far lower than that of the state's large schools.

Robert Gorrell, Director of the New Mexico Public Schools Facilities Authority, endorsed this approach in the agency's 2007 annual report, noting that small neighborhood schools benefit from "lower transportation expenses, especially if the district is able to make use of multi-use community facilities and/or other community spaces that schools traditionally provide. So instead of a district busing all students to a centralized facility, it might, for example, bus some students to a community performing arts center." Gorrell believes that too many school districts have adopted a "keep up with the Joneses" philosophy, building facilities that are too large and elaborate to educate students cost-effectively.

ARGUMENTS AGAINST SMALL SCHOOLS

The bottom line is that small schools cost less and deliver superior results. So what has kept them from being universally embraced? Some critics of small schools argue that large schools are necessary to support a well-rounded curriculum and competitive athletics program, and that allowing the state to set a size cap would undermine local control. However, each of these arguments is easily refuted.

Curriculum

The idea that larger schools provide a broader curriculum has its roots in Conant's original argument for big schools: with more students, schools can economically offer a wider array of different courses. However, this theory is not supported by the research on school size and curriculum, which has found instead that most of the extra courses in large schools consist of additional introductory courses in non-core areas, and that only 5–12% of the students in these schools typically take advantage of specialized course offerings.

Athletics

Another argument for large high schools is that a large student body is needed to develop a competitive athletics program. However, that argument has been refuted by those who understand the issue best. Dr. Dan Salzwedel, who served as Executive Director of the New Mexico Activities Association for close to a quarter century, has long been a proponent of smaller schools. He supports them in part because they increase the opportunities for participation on teams and the leadership development that results. Salzwedel notes



Small Santa Fe High School class, circa 1950. Photo by Tyler Dingee, Courtesy Palace of the Governors (MNM/DCA), #91882.

that there is no evidence to support the idea that college athletics departments are more interested in players from larger schools, and also that only 1.5% of student athletes will ever receive an athletic scholarship to college—and only 1 out of over 13,000 will go on to play professional sports.

In addition, the tightly knit communities that revolve around a single high school and its sports teams, such as Alamogordo, Artesia, Carlsbad, Clovis, Hobbs, and Lovington, are some of the districts least likely to need to build more schools in the near future, because they are located in counties with relatively stable populations. For example, according to U.S. Census numbers, Eddy County, where Artesia and Carlsbad are located, lost 2.5% of its population between 1997–2007, while Curry County, home to Clovis, lost 5.5% during the same period. Lea and Otero County both grew by less than 3% during the past decade—while the state as a whole grew by 23%.

Local Control

A final argument against capping enrollment is that having the state establish maximum school sizes undermines local control of public schools. However, New Mexico has traditionally had much stronger state involvement in the public schools than most other states.

Unlike most states, where local communities provide the lion's share of financial support for the schools, 71.2% of New Mexico's school funding comes from the state, while only 14.3% comes from local sources (the remaining 14.5% comes from the federal government). Nationally, New Mexico ranks fourth highest for the percentage of public school system revenue coming from the state, according to the U.S. Census for the 2005–2006 school year, the last year for which data is available.

Along with state funding comes state control. For example, the state already sets class size caps, requiring that public school teachers be responsible for no more than 20 kindergarteners, 22 first, second, or third graders, and 24 fourth, fifth, or sixth graders. A massive, four-year, randomized study of elementary school students in Tennessee's public schools found that small classes improved math and reading scores for "all kinds of students in all kinds of schools," so New Mexico's class size law was based on solid evidence of proven results—just as caps on school size would be. Rules like these strive to create effective teaching environments for teachers and learning environments for students, and school size limits are the next logical step in this effort.

PERFORMANCE OF SMALL SCHOOLS IN NEW MEXICO

Some of the evidence cited in this report comes from national studies about school size. Since we are in New Mexico, it is always wise to be mindful of the advice of Lew Wallace, who served as New Mexico's Territorial Governor from 1878–1881, and who famously said: "Every calculation based on experience elsewhere, fails in New Mexico."

So how have small schools performed in New Mexico?

To answer this question, it is instructive to look at which schools the New Mexico Public Education Department (PED) touts on its website. For example, the PED highlights a 2007 ranking by *U.S. News and World Report* of "America's Best High Schools," which recognized 1,591 schools, including 16 in New Mexico.

A dozen of the 16 had enrollments of fewer than 900 students and eleven were under 500. (The four high schools with enrollments greater than 900 were from relatively wealthy parts of New Mexico: one from Los Alamos and three from the far northeast heights of Albuquerque.)

Among the schools recognized by *U.S. News and World Report* is tiny Tatum High School in Lea County, with an enrollment of 96 students. In 2007, Tatum High School also earned the prestigious "Blue Ribbon" designation from the U.S. Department of Education. The Blue Ribbon designation recognizes schools "that are either academically superior in their states or that demonstrate dramatic gains in student achievement." Tatum High School was one of only 289 public and private high schools nationwide to achieve Blue Ribbon status, and it was the first public high school in New Mexico to do so since 2003.

Remarkably, approximately 70% of Tatum students qualify for free and reduced lunch, while 55% are minority, according to its former principal and current Superintendent of the Tatum Public Schools, Buddy Little. After the dedication of the students and teachers, he attributes much of the school's success to its small class sizes and how well the faculty knows the students and their parents. As a result, teachers can quickly detect when students are struggling and intervene effectively. Little also points out that approximately 85% of Tatum's students participate in extracurricular activities, which would be unlikely to happen in a large high school.



Children at Velarde Elementary School, Velarde, New Mexico, September 2007. Photo by Don Usner.

The PED website also touts the fact that of the only 53 charter schools receiving national recognition as outstanding schools, three were from New Mexico: Taos Municipal School, Moreno Valley High School in Cimarron, and 21st Century Public Academy, a middle school in Albuquerque. Those schools have enrollments of 202, 79, and 204, respectively. As noted earlier in this report, charter schools tend to be small. According to the New

Mexico Coalition for Charter Schools, the 68 charter schools in New Mexico have an average student enrollment of approximately 160 students. This likely explains why the enrollment at charter schools has increased rapidly in the last several years while public school enrollment has remained largely stagnant.

Finally, there is the story of Velarde Elementary School in Rio Arriba County, with 156 students. It is 95 percent Hispanic and nearly three quarters of its students qualify for free or reduced-cost lunches. Those statistics do not generally correlate with high student performance. Yet, Velarde Elementary School's annual test scores make it "one of the best schools in the state," according to an August 11, 2008 profile in the *Albuquerque Journal*. In 2008, it was one of only 320 schools nationally recognized by the U.S. Department of Education for exceptional performance under the No Child Left Behind Act.

Velarde's principal, Roberto Archuleta, told the *Albuquerque Journal*, "I think test scores prove the value of a small school," and pointed out that, "in this area, all the small schools [in Alcade, Velarde, and Dixon] made AYP (Adequate Yearly Progress under No Child Left Behind)."

Archuleta is also proud of the fact that, when Velarde Elementary was pressured to merge with other schools in the region to create one large elementary school, the community and parents fought the consolidation and won.

SMALL SCHOOLS OR DROPOUT FACTORIES?

The term “dropout factory” was coined in 2007 by Robert Balfanz, a research scientist at the Center for the Social Organization of Schools at Johns Hopkins, to describe high schools where no more than 60% of the entering ninth graders make it to graduation. These schools tend to serve mostly low-income and minority students and have very large enrollments.

Twenty-seven percent of New Mexico’s public high schools qualify as dropout factories, the fifth highest ranking in the nation and more than double the national average of 12%.

The term “dropout factory” is harsh, but so are the conditions that students who attend these schools face: high levels of violence, relatively few extracurricular opportunities, and lack of individualized adult attention. The term is also appropriate when one considers the history of very large schools in New Mexico and how heavily those schools were influenced by mass production, as described earlier in this report.

It is the small, high performing schools in New Mexico, like Velarde Elementary, 21st Century Public Academy Middle School in Albuquerque, and Tatum High School, that point us in the direction in which we need to be moving.

The first step in addressing the dropout crisis in New Mexico is to reconsider the entrenched and mistaken thinking about school size that got us to this point where nearly half our children are dropping out, and act upon the overwhelming evidence about what actually works best.

Therefore, Think New Mexico recommends that the legislature and Governor Bill Richardson enact a law during the 2009 legislative session that:

- Requires that schools receiving state capital outlay funding for construction have capacities of no more than 225 students per grade for high school, no more than 120 students per grade for middle school, and no more than 60 students per grade for elementary school; and
- Requires schools receiving at-risk dollars from the state to establish smaller learning communities if they exceed these size limits.

Building smaller schools is something that is within our power to accomplish relatively easily, but we need to act now before we lock ourselves into more costly dropout factories, which can last for a half century or even longer once they are built.

Small schools and smaller learning communities are not panaceas. Making schools smaller simply improves a school’s probability of being successful. Smallness must be combined with involved parents, high quality faculty, principals who are given the autonomy to tailor their schools to the individual needs of their student population, and school districts who hold them accountable for high student achievement. However, large schools make all of this more difficult.

Tackling the dropout crisis by building smaller schools is not a partisan issue. Republican Governor Mark Sanford of South Carolina has launched a campaign to promote smaller neighborhood schools. In a recent State of the State address, he criticized the construction of “massive, isolated schools” and their tendency to “accelerate devel-

opmental sprawl into our rural areas and what comes with it—increased car trips, lengthened bus routes and a disappearing countryside.”

Democratic Governor Jennifer Granholm of Michigan made smaller schools the centerpiece of her 2008 legislative package, which she signed into law on August 6, 2008. That law helps Michigan school districts “replace large, impersonal high schools that have low academic achievement and high dropout rates, with small high schools that use relationships, discipline, and relevance to help at-risk kids achieve.”

Likewise, New Mexico Senator Jeff Bingaman has been championing smaller schools since at least 1999, when he declared: “A good share of the problem that we have running schools well, and providing the education that our kids deserve, is that the schools are too big.”

New Mexico’s dropout rate is unacceptable. The choice is clear: we can continue to build schools that are ineffective and obsolete as soon as they are constructed, or we can place caps on enrollments for high schools, middle schools, and elementary schools and build New Mexico’s public schools again on a human scale.



Groundbreaking for Columbus Elementary School in Deming, New Mexico. Photo courtesy of the New Mexico Public School Facilities Authority, 2007.

TAKE ACTION!

Visit www.thinknewmexico.org and sign up for email action alerts to find out how you can join the movement for small schools in New Mexico.

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One of the key issues that I believe affects safety and the whole educational enterprise is the size of our schools. This is an area where we have made terrible mistakes... Too many schools are just too big.

Jim Hunt, Education Reformer and Former Governor of North Carolina

