WISCONSIN STATE LEGISLATURE COMMITTEE HEARING RECORDS

2005-06
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Senate
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Committee on Education (SC-Ed)

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Information Collected For Or Against Proposal

- Appointments ... Appt
- **

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- Hearing Records ... HR (bills and resolutions)
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- Miscellaneous ... Misc
- **05hr_SC-Ed_Misc_pt04**

Joint Hearing of the Senate & Assembly Education Committees
Governor's Proposal to Increase High School Graduation Requirements in Math & Science

Testimony of Aaron Olver, Executive Assistant
Wisconsin Department of Commerce

November 29, 2005

Good morning.

On behalf of the Doyle administration, I am here to speak briefly about the rationale behind Governor Doyle's proposal to increase the number of math and science courses required for high school graduation.

There are a number of reasons why this is an idea that deserves immediate consideration—both economic and educational in nature. Let me speak first and most thoroughly about the economic imperative for action.

The Economic Imperative

In his latest book, *The World Is Flat*, Pulitzer Prize-winning *New York Times* columnist Thomas Friedman argues that several technological and political forces have converged to level the global playing field, allowing for multiple forms of collaboration without regard to geography or distance.

What does this mean for us as Americans? And why should we in Wisconsin care?

According to Friedman, it means there no longer is such a thing as an "American job." Wisconsin-owned companies in Sheboygan and Superior not only compete with industry rivals in Madison and Milwaukee – as well as those in Minneapolis and Miami – but also with firms in Macao and Mumbai. So American workers and Wisconsin workers today are competing not only with individuals who live across the street—but also with those who live halfway around the world.

Friedman contends that meeting the challenges of a flat world requires as comprehensive, energetic and focused a response as did meeting the challenge of Communism. It requires elected leaders who can summon the nation to work harder, get smarter, attract more young people to careers in science and engineering, and build the broadband

infrastructure that will help every American become more employable in an age in which no one can guarantee you lifetime employment.

Fundamentally, what this means to the individual worker is that a strong back is no longer a guarantee of a job that can support a family. Increasingly, individuals need some higher education, if not a bachelor's degree, to compete in the global marketplace. Today, bachelor's degree holders outearn high school graduates by about 65-70 percent – or about $20,000 – annually.

But high schools are a critical training ground to prepare American students for what comes next—whether higher education or work.

Any way you look at it, Wisconsinites need a far higher level of knowledge and skills to compete in the 21st Century economy than their parents and grandparents did. Public education is the gateway to making this happen. And math and science are critical ingredients to prepare students academically, to open new doors of possibility, and to attract and prepare students in science, technology and engineering – fields that are going to be essential for entrepreneurship and innovation.

Governor Doyle's Grow Wisconsin plan recognizes these facts – investing in cutting-edge research and industries … building industry sectors that will provide high-paying jobs for Wisconsinites … increasing the state's academic expectations of students … and investing in our public schools and institutions of higher education.

Educational Inequality

In this flat world, we need to invest in the education of each and every student.

Research indicates the number and level of high school courses completed by students—especially in the subject of mathematics—correlates strongly with student achievement. And there is an increasing convergence between the level and type of knowledge and skills needed to succeed in higher education and in the workplace. These facts compel American high schools to raise their expectations for all students and offer a more academically challenging curriculum to match it.

The good news is that Wisconsin high school students currently take high-level math and science courses at rates that exceed their peers in many other states—and they succeed in demonstrating their learning. For instance, according to *State Indicators of Science and Mathematics Education 2005* (Council of Chief State School Officers), 61% of Wisconsin took "higher-level" mathematics courses (defined as geometry level or higher)

in the 2003-04 school year. Only students in North Carolina, Texas and Utah outpaced Wisconsin. Further, in 2004, 71% of Wisconsin high school students had taken at least three years of math or a course of math through Algebra II prior to graduating (however, that's actually 1 percentage point below the national average). Finally, over the past 10 years, Wisconsin students have scored highest or second-highest on the ACT in the nation.

But while Wisconsin has some of the highest-achieving students in the nation and some of the best public high schools and universities, too many of our children are falling through the cracks. We cannot afford to lose a single one of them—from an economic or a human perspective.

The fact is that white students in Wisconsin have a far higher chance of graduating high school, attending and completing college, and working at high-paying jobs than do their African-American, Native-American, and Latino counterparts.

Fundamentally, it is these students—disproportionately minority and low-income—that the Governor's proposal is aimed at. It's aimed at those students who are not challenged to take three years of math and who don't have the opportunity to receive mathematics instruction at the level of Algebra II while in high school.

According to research from the U.S. Department of Education and the Educational Testing Service, a course of math through Algebra II is a key indicator of college degree completion and in succeeding in high-performing workplaces. Taking a rigorous high school curriculum that includes math at least through Algebra II can cut the gap in college completion rates between white students and African-American and Latino students in half.

But too many Wisconsin high school students aren't getting this chance.

The facts speak for themselves: Wisconsin has among the largest black-white achievement gaps and college-preparedness gaps in the nation. On the 2005 National Assessment of Educational Progress, Wisconsin's eight-grade math scores for African-American students were 45 points lower than for whites—the second largest gap in the nation. On the 2004 WKCE test in tenth-grade math, 78 percent of whites scored 'proficient' or 'advanced', while only 28 percent of blacks were—a 50 percent gap. And based on the latest ACT college readiness benchmarks, blacks were 6 times less likely than whites to exhibit the level of knowledge and skills needed to succeed in college.

If you listen to high school students of all ability levels and backgrounds, they say they want to be challenged more and have more expected of them in high school. Their voices have emerged in a recent Public Agenda survey – "Life After High School" – and in listening sessions held by First Lady Jessica Doyle, as a member in State Superintendent Elizabeth Burmaster's High School Task Force.

As this issue goes forward in the Legislature, I encourage you to reach out to high school students for their perspective about adult expectations and higher standards.

High School-to-College Alignment

Another important reason to ramp up graduation requirements in math and science is to align them with college entrance requirements. While a student may graduate from a Wisconsin high school having taken only two years of math and science—the basic entrance requirements for the UW System is three years of each.

National organizations such as the National Governors Association and Achieve, Inc. have identified the alignment between high school exit requirements and college entrance requirements as a rather simple but important policy change that states can enact to smooth student pathways to higher education.

First-generation college-going students and non-traditional college students are the most likely to fall victim to these misaligned expectations. And as more school districts cut back on guidance counselors, these students desperately need fewer hurdles to negotiate. They deserve a less complex and more transparent pathway to higher education.

This proposal can serve as one small piece of the puzzle in re-envisioning Wisconsin's educational system as a single PK-16 system rather than as one split into separate and distinct K-12 and higher education establishments.

Other States

Nationwide, 42 states have set credit requirements for high school graduation. Wisconsin began 2005 as one of just 13 states that still required a student to take only two years of math and science to earn a high school diploma. As the year winds to a close, we are about to end the year as one of only nine.

During the past year, **Illinois** passed legislation to require three years of math and science. A new **Oklahoma** law requires three years of math and science, beginning in 2007-08. Last month the **Missouri** State Board of Education voted to require three years

of math and science starting in 2010. And, just this month, the **Idaho** State Board of Education has finalized a proposal to require three years of math and science by 2012. It needs legislative approval in January.

Nationally, large urban school districts have taken similar action. Boston, Chicago, and Philadelphia schools require a common curriculum that includes three years of math and science for all students.

Wisconsin is falling behind.

Wisconsin District Exemplars

States have a compelling interest in both public education and in economic development. As such, they have a strong argument for setting higher standards. This was the rationale behind Wisconsin's current high school graduation requirements, established in the early 1980s, in response to *The Nation at Risk* report which first focused attention on raising academic standards.

While many other states have strengthened their standards since the 1980s to serve the needs of a larger college-bound population and to meet the needs of business and industry for better prepared workers, Wisconsin has yet to do so. Fortunately, despite the challenges, many school districts in Wisconsin have already moved in this direction themselves.

Already, 16 percent of Wisconsin school districts have high school graduation requirements that include at least three years of both math and science—that's 61 school districts across the state (out of 389 districts with a high school). One quarter of districts—26 percent—require at least three years of math; overall, 19 percent require at least three years of science.

These school districts are not clustered in the Milwaukee suburbs or in property-wealthy communities. They are reflective of our state as a whole, representing urban, suburban and rural Wisconsin.

For example, Kenosha schools require all students to complete four years of math and science to graduate, and Green Bay requires its students to complete three years of math.

Both Waukesha in the Milwaukee suburbs and Brown Deer schools in Milwaukee County itself require three years of both math and science.

But rural Wisconsin schools are not left out of the mix.

Rural high schools in Ashland, Columbia, Washburn counties, among many others, have set three years of math and science as the standard for all students.

Our nation's failure to produce sufficient graduates in technical fields such as science and engineering is a "silent crisis," according to Shirley Ann Jackson, president of Rensselaer Polytechnical Institute. It's a crisis that compels state action.

The need for smarter and better prepared high school graduates is too important for state leaders to sit idly by. The Governor has recognized this and called for action.

It needn't be a partisan issue and it shouldn't be about finding fault with educators or high school students for the jobs they're currently doing. It must be about agreeing upon a mutual commitment to raising the bar, setting our sights higher, and helping high schools to make it happen.

Wisconsin must insist that all school districts raise their standards in math and science for all students—to give students a leg up, to open doors of possibility to new careers, to prepare our future workforce, and to position this state as a vibrant participant in the economy of tomorrow.

<u>It cannot be a question of "should we?" – it must be a question of "how can we?"</u>

That said, it is important to recognize that school districts may face some challenges or obstacles in implementing higher expectations and providing more advanced math and science courses for all students. And some students themselves may face some hurdles in meeting these new expectations.

As state policymakers, we must face these issues head on—while continuing to insist upon higher standards.

Whether it be the distribution of qualified math and science teachers or the need for extra academic support for struggling students, there may be ways in which the state can help. But, at the same time, we also must think outside the box and think about utilizing new technologies to offer additional courses, building greater numbers of collaborations

between schools and districts, and look at utilizing federal education dollars in different ways to meet these challenges.

Of course, raising math and science standards is not the only answer. Wisconsin and other states are engaged in a much broader and systemic push to redesign and reform high school education.

For instance, the Gates Foundation has funded the creation of small high schools in Milwaukee to create better learning environments for students.

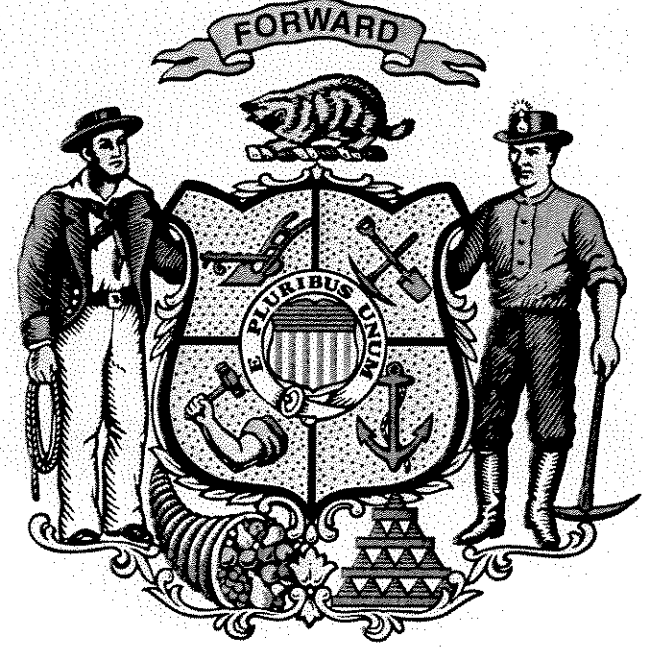
The Governor's Office has received a $500,000 grant from the NGA to expand Advanced Placement course opportunities by piloting on-line and distance learning courses and by waiving AP test fees for disadvantaged students.

The Department of Public Instruction has distributed Mathematics and Science Partnership grants to school districts to improve the content knowledge and pedagogical skills of math & science educators.

And UW-Madison is engaged in a National Science Foundation-funded project to improve the teaching of math and science in k-12 schools.

Governor Doyle and his Administration want to work with the Legislature and all of our education and business partners to ensure that this imperative is acted upon. We look forward to the testimony of others speaking today and to learn about how the state can best move forward in making this happen.

Thank you.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Informational Hearing -

Math & Science Requirement -

Aaron Olver - Exec Assis at Commerce
Economic Imperative - leveling of playing field across the world
no longer American jobs & Wisconsin jobs, global competition
Comprehensive and energetic effort to increase our levels
Workers need to compete, education & training
lagging competitors around the midwest
aligning high school requirements w/ college entrance
requirements
~~42~~ 1 of 13 states to require

Paul Linzmeyer, B
Strong manufacturing climate in WI
if we want hi tech companies to come we need scientists
and engineers, more math
produce innovation - not happening here, no edge
lost 23,000 jobs if we don't do something about math & science
global conditions changing

Unfortunate - Education not a good connection of what
K-16 schools simply compared to putting out
tech colleges great schools
all levels need to improve working together
regional economic group local 18 counties NE WI
Trying to work w/ CESAs

Erp question about Connect →

Big problem in WI - not enough entrepreneurs
not using both sides of brains
Glenn asked how to improve Ed w/ out $ - Paul said make the appropriate investment

Glenn says we're spending more $ w/ less results
opinion or less bang for buck? -

Tom Still - WI Tech Council
Emphasize Global competitiveness problem
do not have to ~~graduate~~ emigrate to innovate
finding enough of the right people is a problem

Rigon - one reason the Tech Council so involved is
Project Lead the Way engineering program
for high school kids - Math & Science fields

Luther asked about the lack of electives if math & science requirements increase
Tom Still thought educators should answer but made
Comment of foreign language necessity
Hard to find a field in manufacturing where Math & Science isn't a priority
distance education and distance learning and help w/
other classes

Esp
Why do college prof think our kids aren't prepared? Do
we need to better communicate

Hundertmark - tell us about students who aren't prepared
response - it does happen. need some clean up
Businesses also say kids right out of high school really need to be brought up to speed
generally in Math & Science, writing skills are lacking as well because of technology
Townsend - Industry ~~is~~ is bringing in foreign nationals
how do we get stronger teachers? Not as much opportunities to keep up w/ her own continuing education
people not coming here anymore for advanced degrees
can do it all from home and innovate in their own countries
Market incentives - to pay more structural change (Townsend)

There was a time in this country that you didn't need to go on to advanced education to market. It's not that way anymore. Necessity will drive people to higher education.

Schools of Math & Science - targeted approach is possible
possible pilot, akin to notion of charter schools

Will passing a mandate really get the job done? How about better counseling.
Schools need to offer the best education for each kid
what kind of grads are we turning out from Ed. schools

Ryan Champeau - Waukesha principal
need for math + science increasing 34 to
students who take more math + science obviously do better on ACT
Waukesha -
Asked about splitting algebra into 2 years so kids know it well.
Local vs state control issues - do you think local schools
~~should~~ the occasion to have the right curriculum? If the
~~should~~ the state raises the bar will locals do the
right thing. Is it best at local level because
they can be creative

Norman Webb - research data is inconclusive
many schools run three a week
gave many statistics, may get a copy
Evidence of higher level achievement increases
don't have evidence for drop out rates w/ higher requirements
Summer school for larger requirements

Cora Marett
Curriculum will not fulfill requirement
Russ' classic everyone must align w/ them
Cora promotes partnerships

Nob Resheske - Cashton - do have 3 years
what we teach, how we teach, staff development
refer to written comments

Tech was beneficial - still doing it with ~~B~~ set aside

longer distance ed is around the more kids will get used to it

Rep. Hundertmark - if they lose the individual there are no physics teachers, need distance learning & online classes

Russ Allen -
perfect storm in WI curriculum is narrowing
NCSL - trying to test so we're losing other things
1/3 of Supers had to cut electives - see written testimony

Dale Basler - Appleton East · WI Society of Science Teachers
good point - let them struggle through math & science while they have help

Achievement Gap Portion

Alberta - NAEP - achievement gap
Manhattan Institute - 91% grad of whites
50% afro Amer
58% of hispanic
development of human potential - 50% of budget better payback
labor shortage
below nat'l avg on income
SE WI is where the gap is below statewide avg
Kenosha, Racine, Mke - minorities do poorly

Libby Burmaster -
Moral imperative
Economic investment
Will give up copy of testimony

Super Bill -
Early childhood intervention
achievement gap grows as ~~the~~ the kids are in the system longer
impact of poverty - no public healthcare infrastructure
in MilW, nutritional needs - universal free and reduced lunch
Dentists - dental work
Special Ed - last of 5 in MPS is special ed
economic impact on special needs unmet
Safety - level of violence
more of a general social poverty issue

Brother Bob - Messner -
Archdiocese work w/ MPS - public, private, religious
all need a quality ed,
EVERYONE needs to do better
higher standards aren't enough
need a lot more than that
minorities do not have the same resources
① Show kids you can do it / give people hope
low reading level, dropped out of school habitual truant
students in Milwaukee like what they do in school
gets them nowhere outside
② want, see it as important, they'll do it

the minute kids lose hope the minute things go to hell
Cooperation to close the gap & urgency

Gerard Robinsson - to ~~eliminate~~ lessen the gap
① lift cap on parental choice
② support Milw small schools initiative
③ retain qualified teachers for ALL CLASSROOMS
④ support & create after school & weekend programs
⑤ take full advantage of public & private sector programs offered in City of Milw

Dr. Howard Garber - serve 12,000 people w/ disabilities

Denni Oulahan -
3 frames of unionism - ① industrial - ~~for~~ wages, benefits, etc
② issues of professional development
③ social justice unionism
80% free & reduced lunch
rate of unemployment, 60% of African American men
"stop and catch your breath"

A Grant WTEA - worked at Milw Partnership Academy
NEA Foundation - $2.5 mill over 5 years of time
use to eliminate the achievement gap
use the $ for all three levels of MTEA
achievement gaps are social justice issue

Role of teachers - teams are at center of efforts
gaps are based on many factors

Sustain efforts - go beyond regular job -

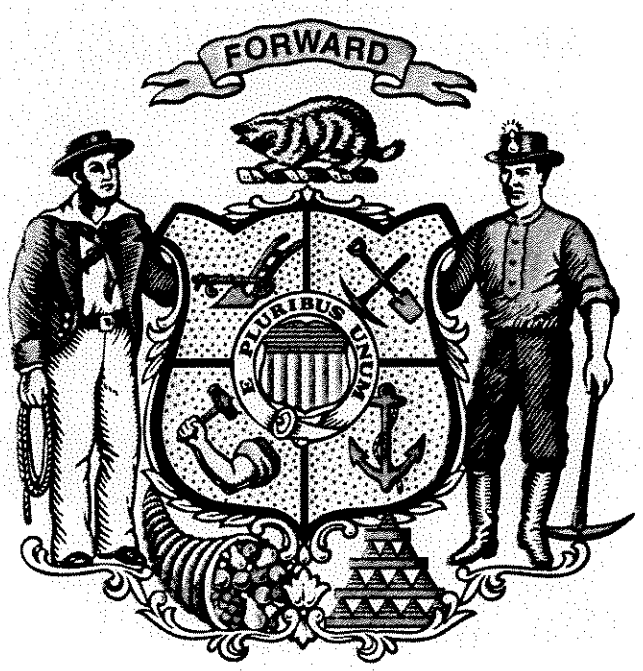
90/90/90 schools. Why doesn't Milw do it more?
Dynamic principals, great superintendents, but no silver bullet

Philosophy stays regardless of staff - principals & teachers

Luther - 90/90/90 works, to him its magic bullet why not
a laser beam to duplicate
Same population ~~same schools~~

Glenn -
Special Ed kids in choice
learning by non same race teachers
Breakdown of family - breakdown of test scores because
of family breakdown

Alberta - AYP scores - what are we doing for these
schools
Schools need mentors for each student - Gerard Robinson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Department of Workforce Development
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201 East Washington Avenue
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Fax: (608) 266-1784
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State of Wisconsin
Department of Workforce Development
Jim Doyle, Governor
Roberta Gassman, Secretary

December 5, 2005

Senator Luther Olsen
P.O. Box 7882
Madison, Wisconsin 53707-7882

Dear Senator Olsen:

Enclosed is information prepared by the Office of Economic Advisors concerning the need for high tech workers in Wisconsin and the role increasing high school math and science requirements plays in securing this workforce. Paul Linzmeyer, Chair of the Council on Workforce Investment, who testified at the November 29 Education Committee Hearing indicated the committee would like a copy of this information.

If you have questions please contact Karin Wells, in the Office of Economic Advisors, at Karin.Wells@dwd.state.wi.us or (608) 264-7841.

Sincerely,

JoAnna Richard
Executive Assistant and Legislative Liaison

Enclosure

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State of Wisconsin
Department of Workforce Development
Jim Doyle, Governor
Roberta Gassman, Secretary

Information prepared for November 29, 2005 Education Committee Hearing
on
Increasing High School Math and Science Requirements

High Tech Employment is Growing in Wisconsin, But Not Enough

There are 75 occupations defined as high technology occupations. These high tech positions are made up of computer specialists, mathematical scientists, engineers, life and physical scientists, and engineering and science technicians. All of these occupations require higher level math and science skills.

In 2002 Wisconsin had 123,200 high tech jobs. These jobs accounted for 4.2% of all non-farm jobs in the state.

By 2012, Wisconsin is expected to have added 23,100 new high tech positions to reach a level of 146,300. So, in 2012, 4.4% of the state's jobs will be high tech.

To reach the projected level of 146,300 jobs Wisconsin will have to find an additional 46,700 people competent in math and science. While 23,100 people will be needed to fill newly created high tech jobs, another 23,600 people will be required to replace those who retire or otherwise permanently leave existing positions.

So far I have only described what is likely to happen in Wisconsin if it continues on its current path. Even though the number of high tech jobs will grow on this present path, Wisconsin must significantly change its course if it strives to match the proportion of high tech jobs projected for the nation. Wisconsin must do even more if it endeavors to match its neighbor Minnesota.

In 2012, the proportion of high tech jobs in the US is expected to be 5.4% (compared to 4.4% for Wisconsin). In order for Wisconsin to match the nation it will need to create a total of 58,100 new high tech jobs (instead of 23,100) as well as fill openings due to retirements. Overall this means Wisconsin needs almost 82,000 new high tech workers to match the nation.

To reach Minnesota's 2012 high tech share of 5.6%, Wisconsin will need to create 64,900 new high tech jobs. With replacement openings included, Wisconsin needs almost 89,000 new high tech workers to match Minnesota – 89,000 people highly skilled in math and science.

If Wisconsin is to alter its high tech course, Wisconsin must simultaneously:

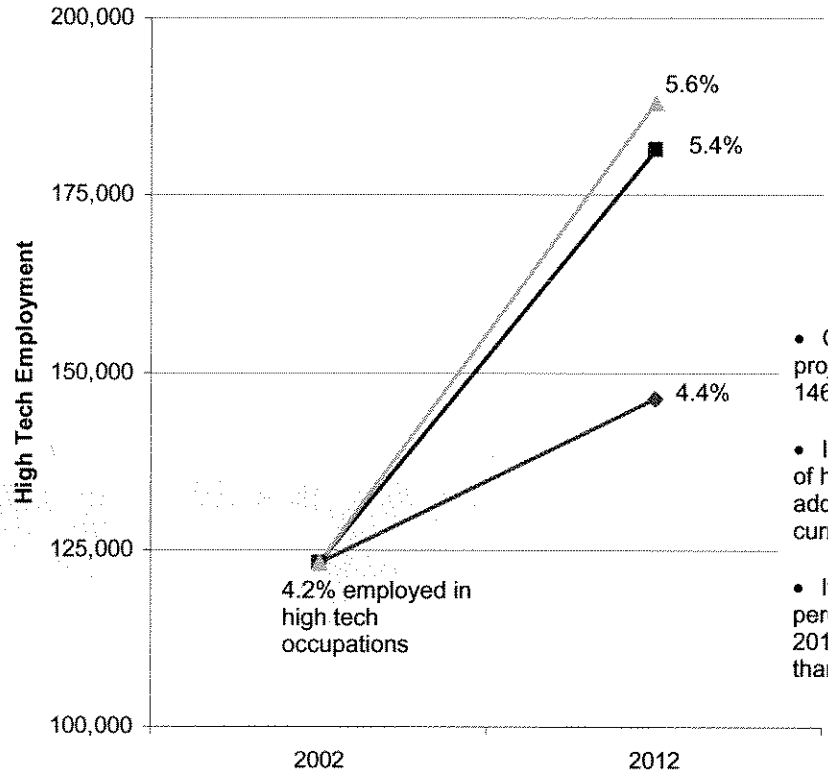
- Increase the proportion of high tech workers in all of its existing industries including its high tech industries. High tech industries have at least 9.8% of their workers in high tech jobs. It is important to note that in 2002, Wisconsin actually had a larger proportion of its overall workforce employed in high tech industries than the nation (13% for WI vs. 11% for US), but had a smaller fraction of its overall workforce in actual high tech positions (4% in WI vs. 5% for US). However, this will bring Wisconsin only 64% of the way to meeting the goal of matching the nation by 2012.

- Change its industrial composition by shifting from industries with intrinsically low percentages of high tech workers to those with higher percentages. This will bring Wisconsin the other 36% of the way to matching the nation.

- Increase the wages paid to high tech workers to at least the national average.

- Ensure it has the additional 82,000 to 89,000 highly trained and skilled math and science professionals needed to fill its high tech positions. A significant part of this step means that more Wisconsin high school students must be adequately prepared to pursue math and science careers.

Wisconsin's High Tech Employment: Three Possible Futures



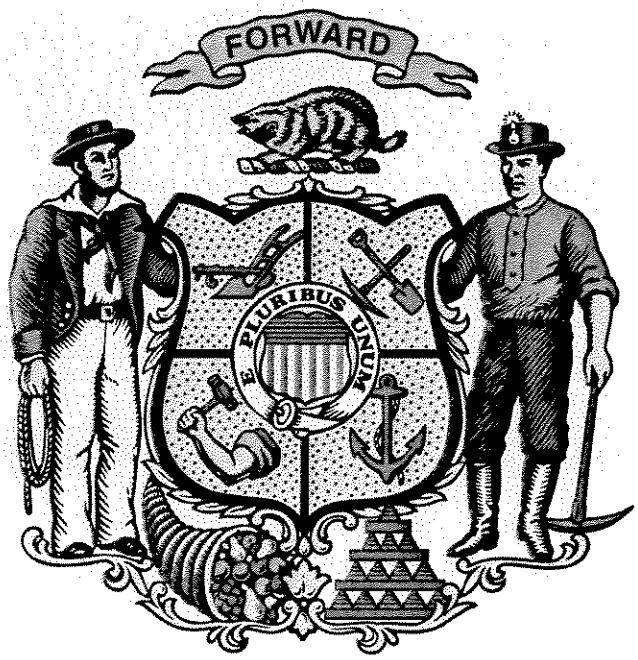
- Currently, high tech jobs in Wisconsin are projected to increase from 123,200 in 2002 to 146,260 in 2012.
- In 2012, if Wisconsin matched the percentage of high tech jobs expected for the US, it would add 35,000 more high tech workers to the current projection.
- If Wisconsin were to employ the same percentage of high tech workers as Minnesota in 2012, it would have 41,800 more high tech jobs than the current projection.

Wisconsin High Tech Employment 2012, On Current Path

SOC Code	Occupational Title	2002 Estimated Employment	2012 Projected Employment	2002-2012 Employment Change	2002-2012 Percentage Change	2002-2012 Replacement Openings	2002-2012 Total Openings
00-0000	**Total, All WI Occupations**	**2,963,190**	**3,357,440**	**394,250**	**13.3%**	**705,700**	**1,100,000**
	Total, WI High Tech Occupations	**123,200**	**146,260**	**23,060**	**18.7%**	**23,600**	**46,700**
	% High Tech Occupations	**4.2%**	**4.4%**	**5.8%**		**3.3%**	**4.2%**
11-3021	Computer/Information Systems Managers	4,460	5,880	1,420	31.8%	800	2,200
11-9041	Engineering Managers	3,480	3,790	310	8.9%	700	1,000
11-9121	Natural Sciences Managers	520	560	40	7.7%	100	100
15-0000	Computer & Mathematical Occupations	49,480	65,140	15,660	31.6%	6,700	22,400
17-2000	Engineers	29,010	31,070	2,060	7.1%	6,500	8,600
17-3000	Drafters/Engineering/Mapping Techs	18,470	19,790	1,320	7.1%	4,500	5,800
19-1000	Life Scientists	6,160	6,970	810	13.1%	1,400	2,200
19-2000	Physical Scientists	5,370	5,950	580	10.8%	1,500	2,100
19-4000	Life, Physical, and Social Science Techs	6,250	7,110	860	13.8%	1,400	2,300

Sources:
Wisconsin Projections 2002-2012, Office of Economic Advisors, Wisconsin Department of Workforce Development.
Minnesota Projections 2002-2012, Minnesota Department of Employment and Economic Development.
U.S. Projections 2002-2012, Bureau of Labor Statistics, US Department of Labor.
Daniel E. Hecker, "High-technology employment: a NAICS-based update," Monthly Labor Review, July 2005, pp. 57-72.

Prepared by: Karin Wells, Office of Economic Advisors, Karin.Wells@dwd.state.wi.us or (608) 264-7841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CHAPTER

The 90/90/90 Schools: A Case Study

Research conducted at the Center for Performance Assessment on the "90/90/90 Schools" has been particularly instructive in the evaluation of the use of standards and assessment. The research includes four years of test data (1995 through 1998) with students in a variety of school settings, from elementary through high school. Our analysis considered data from more than 130,000 students in 228 buildings. The school locations included inner-city urban schools, suburban schools, and rural schools. The student populations ranged from schools whose populations were overwhelmingly poor and/or minority to schools that were largely Anglo and/or economically advantaged.

One reason that the research in these schools was so productive is that the districts maintained careful records on actual instructional practices and strategies. This allows researchers to investigate associations between instructional strategies and academic achievement results. It is important to acknowledge, however, that these results are only associative in nature. We make no claim that a single instructional intervention can be said to "cause" a particular achievement result. What we can say with a high degree of confidence, however, is that there are some consistent associations between some classroom strategies (for example, performance assessments that require writing) and student achievement in a wide variety of tests and subjects. One final note: We make absolutely no claim that the schools in the study were the beneficiaries of any proprietary "program" or "model" of instruction.

The research literature in every field from pharmaceuticals to education contains too many "studies" that purport to show the effectiveness of treatments that the authors of the research have used. Our role in this investigation is that of journalist and researcher, not of architect of any program or intervention. Hence, we do not claim any credit for improved academic achievement that is rightfully due to the students, teachers, and administrators in the study.

Characteristics of 90/90/90 Schools

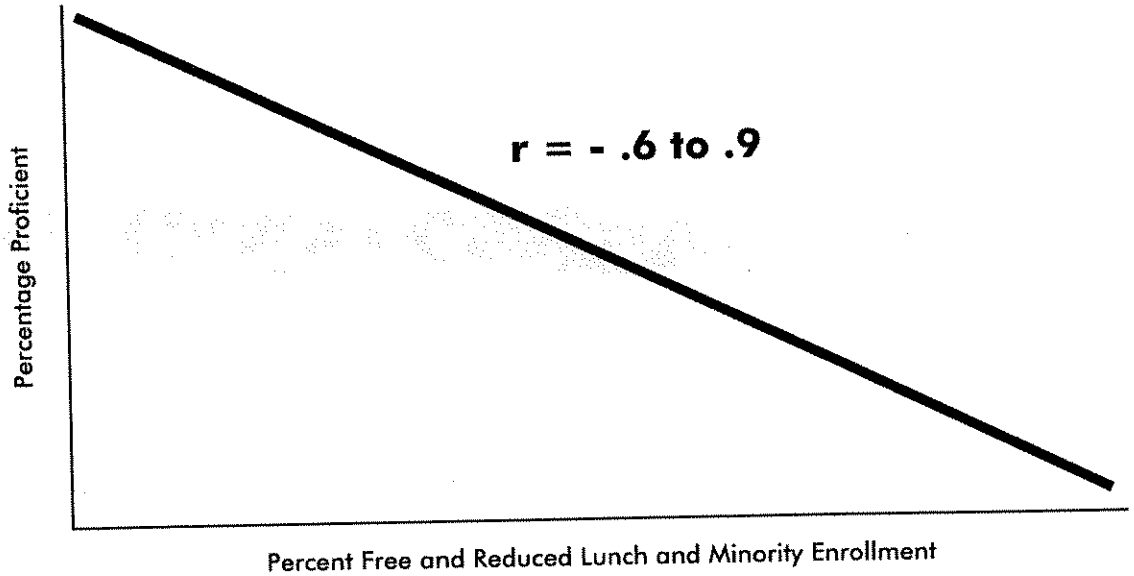
The 90/90/90 Schools have the following characteristics:

- More than 90 percent of the students are eligible for free and reduced lunch, a commonly used surrogate for low-income families.
- More than 90 percent of the students are from ethnic minorities.
- More than 90 percent of the students met or achieved high academic standards, according to independently conducted tests of academic achievement.

The educational practices in these schools are worthy of notice for several reasons. First, many people assume that there is an inextricable relationship between poverty, ethnicity, and academic achievement. The graph in Figure 19.1 expresses the commonly held belief that poverty and ethnic minority enrollment are inextricably linked to lower levels of student achievement.

Figure 19.1

Common Assumptions About the Relationship Between Poverty, Minority Enrollment, and Student Achievement



In this chart, the prevailing hypothesis leaves no room for students in the upper right-hand corner of the graph—that is, schools that have high academic achievement coincident with high poverty and high minority enrollments. This is consistent with national observations dating back to the 1960s in which demographic characteristics were regarded as the dominant variables influencing student achievement. In fact, the actual data from the December 1998 Comprehensive Accountability Report of the Milwaukee Public Schools shows a different story. In individual schools, there are striking numbers of students who are

poor and who are members of ethnic minorities who also academically proficient. Throughout the entire system of more than 100,000 students, the relationship between poverty and student achievement is not the postulated -.6 to -.9, but rather a -.2. While the impact of poverty clearly has not been eliminated, the prevailing hypothesis that poverty and ethnic minority status are invariably linked to low student achievement does not conform to the data.

Common Characteristics of High Achievement Schools

Our research on the 90/90/90 Schools included both site visits and analyses of accountability data. The site visits allowed us to conduct a categorical analysis of instructional practices. In the same manner that the authors of *In Search Of Excellence* (Peters and Waterman, 1982) identified the common practices of excellent organizations, we sought to identify the extent to which there was a common set of behaviors exhibited by the leaders and teachers in schools with high achievement, high minority enrollment, and high poverty levels. As a result, we found five characteristics that were common to all 90/90/90 Schools. These characteristics were:

- A focus on academic achievement
- Clear curriculum choices
- Frequent assessment of student progress and multiple opportunities for improvement
- An emphasis on nonfiction writing
- Collaborative scoring of student work

Focus on Academic Achievement

After visiting all of the 90/90/90 Schools, we noticed profound differences between the assessment and instructional practices of these schools and those of low-achieving schools. First and most importantly, the 90/90/90 Schools had a laser-like focus on student achievement. The most casual observer could not walk down a hallway without seeing charts, graphs, and tables that displayed student achievement information, as well as data about the continuous improvement students had made. The data were on display not only in principals' offices, but also throughout the schools. In addition, we saw school trophy cases full of exemplary academic work, including clear, concise essays, wonderful science projects, terrific social studies papers, and outstanding mathematics papers. In short, the 90/90/90 Schools made it clear to the most casual observer that academic performance was highly prized.

The focus on achievement in these schools included a particular emphasis on improvement. The comprehensive accountability system in use by these schools forced every school to identify five areas in which they measured improvement. Although the school could choose the goal from a menu, the common requirement was to focus on a few indicators of improvement in contrast to the typical school improvement plan that contains a large number of unfocused efforts to improve. The focus on improvement is especially important in an environment where many students come to school with academic skills that are substantially below grade level. The consistent message of charts showing weekly improvement from the fall through the spring was, "It's not how you start here that matters, but how you finish." Improvements of more than one grade level in a single year were common, and teachers and administrators paid particular attention to students whose deficiencies in reading and writing would have a profound impact on their success in other subjects. Some students spent as many as three hours per day in literacy interventions designed to get students to desired achievement levels. There did not appear to be any consistency with regard to the intervention programs in use by these schools. Some used Success for All, others used Reading Recovery, while others used the Efficacy Model. Others had no specified program at all, but consistently applied focused intervention for students in need using their own teaching staff.

Curriculum Choices

Such a focus on achievement inevitably leads to curriculum choices, spending more time on the core subjects of reading, writing, and mathematics and less time on other subjects. It is possible, for example, that many of the teachers in these schools did not "cover the curriculum" in the strict sense of checking off objectives from a wide variety of curricular areas. They chose—wisely, we believe—to emphasize the core skills of reading, writing, and mathematics in order to improve student opportunities for success in a wide variety of other academic endeavors later. It is interesting to note parenthetically that, despite their disproportionate emphasis on language arts and mathematics, these schools also significantly out-performed their peer schools on science tests as well. This makes an important point that eludes those who remain committed to a "coverage" model: tests of science, social studies, study skills, and virtually every other subject area are, in fact, tests of reading and writing.

Frequent Assessment of Student Progress with Multiple Opportunities for Improvement

Many of the high-poverty schools included students whose skills were significantly below grade level in academic achievement as they entered the school. The consistent message of the 90/90/90 Schools is that the penalty for poor performance is not a low grade, followed by a forced march to the next unit. Rather, student performance that is less than proficient is followed by multiple opportunities to improve performance. Most of these schools conducted weekly assessments of student progress. It is important to note that these assessments were not district or state tests, but were assessments constructed and administered by classroom

teachers. The consequence of students performing badly was not an admonishment to "Wait until next year" but rather the promise that "You can do better next week."

A frequent challenge to this practice is that students should learn to "get it right the first time." The flaw in such a statement is the implied assumption that the traditional "one-shot" assessment is successful in leading students to "get it right the first time." In fact, when students know that there are no additional opportunities to succeed, they frequently take teacher feedback on their performance and stuff it into desks, back packs, and wastebaskets. Students in this scenario are happy with a "D" and unmotivated by an "F." After all, there is nothing that they can do about deficient performance anyway. In a classroom assessment scenario in which there are multiple opportunities to improve, however, the consequence for poor performance is not a bad grade and discouragement, but more work, improved performance, and respect for teacher feedback. In this respect, the use of teacher evaluation based on assessment scoring guides looked much more like active coaching after which improvement was required, and much less like final evaluation from which there was no reprieve.

Written Responses in Performance Assessments

By far the most common characteristic of the 90/90/90 Schools was their emphasis on requiring written responses in performance assessments. While many schools with similar demographic characteristics employed frequent assessment techniques, many of the less successful schools chose to emphasize oral student responses rather than written responses. The use of written responses appears to help teachers obtain better diagnostic information about students, and certainly helps students demonstrate the thinking process that they employed to find a correct (or even an incorrect) response to an academic challenge. Only with a written response from students can teachers create the strategies necessary to improve performance for both teacher and learner.

In virtually every school we have evaluated, student scores on creative writing are significantly higher than informative and narrative writing scores. As a result, teachers in the successful 90/90/90 Schools placed a very high emphasis on informative writing. They typically used a single scoring rubric to evaluate student writing and applied this scoring guide to every piece of written work. Whether the student was writing a book report, lab report, social studies report, analysis of a sporting event, description of a piece of music, or a comparison of artists, the message was the same: this is the standard for good writing, and there are no compromises on these expectations for quality.

The benefits of such an emphasis on writing appear to be two-fold. First, students process information in a much clearer way when they are required to write an answer. They "write to think" and, thus, gain the opportunity to clarify their own thought processes. Second, teachers have the opportunity to gain rich and complex diagnostic information about why students respond to an academic challenge the way that they do. In contrast to the binary feedback (right/wrong) provided by most

assessments and worksheets, the use of performance assessments that require written responses allows the teacher to diagnose obstacles to student learning. By assessing student writing, teachers can discern whether the challenges faced by a student are the result of vocabulary issues, misunderstood directions, reasoning errors, or a host of other causes that are rarely revealed by typical tests.

The association between writing and performance in other academic disciplines was striking, and this gets to the heart of the curriculum choices that teachers must make. At the elementary level, for example, teachers were faced with a formidable set of curriculum standards in both science and writing. Many of the most successful schools reported that they had to sacrifice time allocated to every other curriculum area except reading, writing, and mathematics. Nevertheless, more than 80 percent of the 135 elementary schools in the study improved in science scores in 1998, compared to 1997. The Pearson correlation between writing improvement and science improvement is striking: .74—a large correlation in virtually any area of social science research. This correlation took place without any changes in the science curriculum and few apparent modifications in teaching methods. I would offer the same caution as provided earlier in the chapter that correlation is not causation. Nevertheless, when two variables appear to behave in such a similar way, it is difficult to escape the conclusion that an emphasis on writing improvement has a significant impact on student test scores in other disciplines, including science.

External Scoring

Another striking characteristic of the 90/90/90 Schools was frequent external scoring of assessments. While many schools continue to rely upon the idiosyncratic judgment of individual teachers for a definition of "proficiency," the high-achieving schools made it clear that no accident of geography or classroom assignment would determine expectations for students. Rather, these schools developed common assessment practices and reinforced those common practices through regular exchanges of student papers. One teacher would exchange papers with another teacher; principals would exchange papers with another school; and in one of the most powerful research findings, principals would take personal responsibility for evaluating student work.

When teachers exchange papers, it is imperative that they have a uniform basis on which to evaluate student work. The degree of agreement among teachers in their use of performance assessment scoring can be measured by "inter-rater reliability." Reliability, when the term is applied to traditional tests, is a measure of consistency. In the case of measuring consistency in scoring, it is simply the percentage of teachers who score an identical piece of student work the same way. If, for example, ten teachers evaluate a piece of student work, and eight believe that the work is "proficient" and two believe that it is only "progressing," then there is an 80 percent reliability rating for that test. This degree of reliability—80 percent—is the target at which teachers should aim as they jointly evaluate student work. It is very unusual (but not unheard of) for that level of agreement to be achieved the first time that teachers jointly score student work. More frequently, there are disagreements

among teachers on the evaluation of student work. These disagreements usually stem from one of two causes. First, teachers frequently use implicit scoring criteria that are not part of the official scoring guide. Examples of implicit criteria include such statements as "He should have written in cursive," or "She knew that she should have included that character in her essay." While these expectations may have been reasonable to these teachers, those criteria did not appear in the scoring guide. It is therefore little wonder that other teachers, who did not share those implicit expectations, failed to mark students down for these failings.

The second cause of teacher disagreement is the lack of clear specifications in the scoring guide itself. Too frequently a disagreement among evaluators leads to an argument rather than to an exploration of how agreement can be achieved through a revision of the scoring guide. "If we change the definition of proficient from this to that, perhaps we could agree on how to mark this paper." Words such as these are the basis of a far more meaningful discussion than, "Of course it's proficient! Don't you see?"

Long-Term Sustainable Results without Proprietary Programs

One of the most powerful findings of the 90/90/90 study is the continuous nature of the success of these schools, even as the poverty of students attending these schools remains intractable. Several of the schools listed below have consistently appeared on the 90/90/90 list, even as students change from year to year, as the effects of poverty grow more onerous, and as parents participating in welfare reform programs are less likely to be at home before and after school. Moreover, these schools are achieving their success without proprietary programs. Let there be no doubt: Our role in this research is as researcher and reporter. None of the 90/90/90 Schools used a specific "program" or any other proprietary model in order to achieve their success. On the contrary, we observed effective teachers and administrators using strikingly similar techniques without the assistance of externally imposed methods of instruction. The techniques used by these schools are replicable, but there is certainly not a need for schools to purchase special textbooks, curriculum materials, or secret information to achieve the level of success enjoyed by these schools.

Non-Proprietary Instructional Practices

In an era in which school leaders appear to engage in a perpetual quest for the magic bullet of educational success, it is noteworthy that none of the 90/90/90 Schools relied exclusively upon a proprietary program to achieve their success. Instead, these schools used consistent practices in instruction and assessment, with support

from local teachers. For those who believe that education remains an interactive process that cannot and should not be "teacher-proofed," these research findings are encouraging. The other edge of this particular razor is that we cannot depend upon proprietary systems to save us. It is the collective work of teachers, students, parents, and leaders that will ultimately lead us out of the present malaise. Every one of the 90/90/90 Schools had academic content standards, but so do many ineffective schools. The distinguishing characteristic of the 90/90/90 Schools was not merely that they had standards, but rather, how the standards were implemented, monitored, and assessed.

Data from the "90/90/90" Studies

A current list of some of the 90/90/90 Schools from Milwaukee, Wisconsin, is provided by the school system in their comprehensive accountability report. Since the publication of the first list in 1998, the number of schools qualifying for the designation has more than tripled. The data were independently verified by Schmoker (2001) in direct interviews with Milwaukee administrators. These schools have graciously hosted hundreds of visitors in the past few years as their successes have become more widely recognized. Researchers and educators should always be willing to share their sources of information and welcome the reviews of colleagues in the field. However, I cannot help but note how profoundly disturbing it is to me that I am frequently requested—demanded is not too strong a term—to produce the names and locations of these schools. In fact, these schools have received significant public attention through the Video Journal of Education, Volumes 802 and 803 (Linton Professional Development Corporation, 1998). Research should, of course, be subject to verification and scrutiny. Nevertheless, I cannot avoid noticing that in my many years of conducting, writing, and reviewing educational research, I have never seen such a demand for "names, dates, and places" accompany the allegation that children who are poor and children of ethnic minority groups perform badly on tests. When *The Bell Curve* (Herrnstein and Murray, 1994) was published with the widely accepted assertion that children who are black and poor perform badly on academic achievement tests, I cannot recall a single instance of demands for the names of students who were subjects of the studies cited. When we have demonstrated that poor and black children perform well, we are inundated with demands for verification. These demands speak volumes about the expectations of children based on their appearance and economic status.

After the original accountability report documenting the 90/90/90 Schools, Milwaukee Public Schools has issued subsequent accountability reports. The findings from these reports are striking. In brief, these findings include the following:

1. Techniques used by the 90/90/90 Schools are persistent. The students are still poor and their economic opportunities have not improved. Nevertheless, more

than 90 percent of the students in these schools continue to meet or exceed state standards.

2. Techniques used by the 90/90/90 Schools are replicable. The first time the district tracked these schools, only seven 90/90/90 Schools were identified. In the most recent report, 13 schools meet the criteria for this distinguished label.

3. Techniques used by the 90/90/90 Schools are consistent. These schools are not lurching from one fad to another. While they differ in some respects with regard to implementation, they are consistent with regard to the following areas of emphasis:
   - Writing—students write frequently in a variety of subjects.
   - Performance Assessment—the predominant method of assessment is performance assessment. This does not mean that these schools never use multiple-choice items. However, it is performance assessment in several different disciplines that local observers have associated with student progress.
   - Collaboration—teachers routinely collaborate, using real student work as the focus of their discussion.
   - Focus—teachers in these schools do not try to "do it all" but are highly focused on learning.

Additional Information on Success in Challenging School Environments

Over the years, I have continued to hear doubts and challenges that poor students can perform well. Indeed, the charge is frequently leveled that comprehensive accountability systems are disadvantageous for poor schools. In fact, systematic research from comprehensive accountability systems allows us to document and celebrate the success of students in these schools. Two additional sources of research on this subject come from strikingly different sources. Casey Carter, author of the "No Excuses" case studies from the Heritage Foundation (1999), provides a conservative viewpoint. The details of these cases are available at www.heritage.org. A politically liberal viewpoint is often associated with Kati Haycock and the Education Trust (1998, 2001). Their landmark research on student success in high poverty schools makes a striking case that these schools are not isolated anecdotes. Indeed, the fundamental finding from the Education Trust studies is that however important demographic variables may appear in their association with student achievement, teaching quality is the most dominant factor in determining student success. It turns out, of course, that teaching quality and subject matter certification are much more likely to occur in economically advantaged schools.

The case made by Haycock and others at the Education Trust is clear: the key variable is not poverty, but teaching quality. While poverty and other demographic variables may be important, they are not determinative in predicting student success. The detailed research from the Education Trust, including an interactive program allowing the user to specify the characteristics of a school and find specific data on comparable high-performing schools throughout the nation, is available at www.edtrust.org.

The consensus of the evidence from very different perspectives is clear: effective teaching and leadership make a difference. The lessons of the 90/90/90 Schools as well as the lessons of other studies provide convincing evidence that accountability systems, properly designed, can provide a wealth of information for those desiring to find the keys to improved achievement for all students.

Using the 90/90/90 Practices to Improve Achievement and Close the Equity Gap

Researchers and practitioners must always confront the gap between theory and reality, between anecdote and evidence. "Sure it worked there," the skeptics say, "but our kids are different." The ultimate test of the 90/90/90 research is whether it is sustainable and replicable. Simpson (2003) provides compelling evidence that the practices of the 90/90/90 Schools can be applied in a diverse urban environment with similar results:

> Like the city, Norfolk Public Schools, the first public school system in Virginia, has seen its fortunes go up and down. It's an urban district that serves a diverse population: 67 percent of students are black and 28 percent are white. More than 65 percent of students qualify for free and reduced-price lunches.
>
> - 100 percent of our schools met the state benchmarks in writing in all grades tested.
> - 100 percent of our high schools met the state benchmarks in chemistry.
> - 100 percent of our middle schools are fully accredited in earth science.
> - 100 percent of our middle and high schools showed positive trends in reading, literature, and research.
>
> Also, our schools reduced the achievement gap between white and black students in third, fifth, and eighth grades, with both groups continuing to improve. They decreased disciplinary actions by 15 percent, the number of long-term suspensions by 14 percent, and the number of expulsions by 66 percent. In addition, we have two "90/90/90 schools." These are schools with more than 90 percent of students eligible for free and reduced-price lunch, more than 90 percent are minority students, and more than 90 percent of

students met high academic standards on the state's Standards of Learning tests. (Simpson, 2003, pp. 43-44).

At the beginning of the 2002-2003 school year, I examined the accountability reports of each of the schools in Norfolk, Virginia, and conducted numerous site visits and interviews. In particular, I wondered if the buildings that experienced gains of 20 percent or more in their academic achievement in language arts, mathematics, science, and social studies were significantly different than their counterparts in other schools. The schools with the greatest gains were not similar demographically, as they included high-poverty and low-poverty student populations. The financial support, staffing patterns, union agreements, and central office support were similar for all schools. Therefore, neither the demographic variables of students nor the external variables of funding and labor agreements could explain the extraordinary differences between the schools. The keys to improved academic achievement are professional practices of teachers and leaders, not the economic, ethnic, or linguistic characteristics of the students. The Norfolk accountability system revealed striking similarities to other research on the characteristics of successful schools. Although surely there are many other traits shared by effective organizations of all types, the Norfolk Accountability System provided an insight into measurable indicators that were linked to the largest gains in student achievement. These characteristics also make clear that successful accountability is not the exclusive domain of the "Department of Accountability" in the central office, but rather is a responsibility shared throughout the system on many levels. The observations made on the basis of this inquiry are strikingly similar to observations I have made in other school systems over the course of several years. The following paragraphs highlight the nine characteristics that distinguished the schools with the greatest academic gains.

The Impact of Collaboration

First, the schools devoted time for teacher collaboration. This was not merely an exercise in idle discussion nor at attempt to get along in a friendly and collegial fashion. Rather, collaboration meetings were focused on an examination of student work and a collective determination of what the word "proficiency" really means. At first, teachers identified wide variations in their opinions and were alarmed to see how differently they evaluated the same piece of student work. In the course of many sessions, the most effective schools made time for collaboration very frequently and in some cases did this every day. Where does the time come from for effective collaboration? None of these schools had extra money in the budget or more hours in the day. Rather, they used the time that they already had with an intentional focus on collaborative scoring of student work. For example, the principals made their faculty meetings "announcement-free zones." Rather than drone through a laundry list of announcements (with inevitable comments and controversies), their rule was that the transmission of information would always be in writing. This allowed time formerly devoted to faculty meeting announcements

to be dedicated to collaboration. The principals were literally on the same side of the table as their faculty members, with faculty members who were experienced in collaborative scoring taking turns facilitating faculty meetings. The other source of time for collaboration was professional development meetings. Rather than presentations by outside staff developers, a significant degree of the professional development time was allocated to collaborative scoring. These educators knew that collaboration is hard work. Moreover, they understood that it is a skill acquired over time. Hence these remarkably effective schools did not have a "collaboration day" or a "collaboration workshop" but rather made the collaborative scoring of student work a part of their regular routine.

The Value of Feedback

Second, the schools with significant improvements provided significantly more frequent feedback to students than is typically the case with a report card. Emulating their most successful colleagues in music and physical education, teachers provided feedback in real time. They knew that a basketball coach does not provide hints on an effective jump shot nine weeks after an error, nor does a great music teacher note the improper position of the violinist's left hand weeks after noticing the mistake, but rather coaches and musicians provide precise and immediate feedback. In some cases, teachers took a triage approach, providing traditional report cards to successful and self-directed students, while providing weekly reports on their progress to students who were struggling. Their approach to feedback was consistent with Robert Marzano and his colleagues whose meta-analysis of research on student achievement revealed that feedback had a profound impact on student achievement, provided that the feedback was timely, accurate, and specific (Marzano, Pollock, and Pickering, 2001). The emphasis that these teachers placed on accuracy in feedback was remarkable. Unlike the "positive distortion" that clouds so much classroom feedback (Foersterling and Morgenstern, 2002), teachers with large gains were committed to feedback that was consistently accurate, with student performance compared to unambiguous expectations.

The Impact of Time

Third, the schools with large gains made dramatic changes in their schedule. Although they had the same budget, state requirements, teacher's union contract, and other restrictions as other schools in the system, the schools with large gains made remarkable schedule changes. At the elementary level, they routinely devoted three hours each day to literacy, with two hours of reading and one hour of writing. At the secondary level, they routinely provided double periods of English and mathematics. This was not a shell game in which they used the block schedule to double up some times but cut back on English and math in other times, but rather represented a genuine increase in instructional hours of math and English. The

essential nature of instructional time is hardly a new idea, yet in an astonishing number of schools, the schedule is revered more than the Pledge of Allegiance, Constitution, and Magna Carta combined. To break the mold in student achievement, these schools discovered, they had to break the schedule. It is interesting that this commitment to time for literacy instruction occurred in a state in which social studies and science content examinations were required. These teachers and principals did not change the schedule to over-emphasize literacy because they disregarded science and social studies, but rather because they knew that literacy was essential for success in every content area.

Action Research and Mid-Course Corrections

Fourth, teachers engaged in successful action research and mid-course corrections. In many of the schools with the greatest gains, their school accountability plans were not static documents set in concrete before the beginning of the school year, but dynamic and flexible guides. They asked the central office for permission to change goals and strategies that were not effective and start new ones that held promise, even during the school year. Moreover, these faculties and leaders learned from one another. An illustration of their commitment to the application of action research is the use of word walls at the secondary level. Because both the school improvement data and the instructional techniques associated with those improvements are transparent in a system of holistic accountability, the teachers who had achieved great things with students were subject to being questioned by colleagues throughout the system about their success. When in earlier years, elementary educators reported that significant improvements in vocabulary and reading comprehension results were associated with the implementation of word walls, the secondary science and social studies educators decided to adopt the idea. They created walls with words containing essential science and social studies vocabulary, sometimes associated with vivid visual images, and used those vocabulary words throughout the year. In other examples of effective action research, teachers replicated one another's writing rubrics, interdisciplinary assessments, and student motivation practices.

Aligning Teacher Assignments with Teacher Preparation

Fifth, principals made decisive moves in teacher assignments. Some writers have argued that when test scores are down, the entire school should be reconstituted and the entire faculty dismissed. In my observations, however, principals have made impressive gains by reassigning teachers to different grades within the same school. Consider what has happened to the curriculum—particularly in the fourth, fifth, and sixth grades—over the past decade. There has been an enormous growth in the

complexity of the curriculum, particularly in math and science, with an accompanying set of assumptions about the undergraduate curriculum of the teachers responsible for those grades. Those assumptions have sometimes been wildly inappropriate. When the fourth grade curriculum requires an understanding of algebra and scientific inquiry and the teacher's undergraduate preparation does not include those subjects, there is a challenge that will not be solved with a one-day staff development course in academic standards. The teachers whose undergraduate backgrounds fail to match the standards are not bad people nor are they unprofessional educators. Rather, their preparation is better suited to a different grade level. Effective leaders know that they should seek not to "fix" the person, but rather find a job (and accompanying set of standards) that best meets the teacher's abilities and backgrounds. By making decisive moves in teacher assignments, these principals saved the careers of some teachers and dramatically improved the achievement of their students.

Constructive Data Analysis

Sixth, successful schools included an intensive focus on student data from multiple sources, and specifically focused on cohort data. They were less interested in comparing last year's fourth grade class to this year's fourth grade class (which are, in most instances, different children) and more interested in comparing the same student to the same student. Their most important questions were not, "Is this year's class different from last year's class?" but rather:

- "What percentage of a group of students is proficient now compared to a year ago?"
- "What percentage of our students have gained one or more grade levels in reading when we compare their scores today to their scores a year ago?"
- "Of those students who were not proficient a year ago, what percentage are now proficient?"
- "Of those students who were proficient a year ago, what percentage are now advanced?"

In brief, these teachers compared the students to themselves rather than to other groups of students. This analysis allowed them to focus their teacher strategies on the needs of their students and not on generic improvement methods.

Common Assessments

Seventh, the schools with the greatest improvements in student achievement consistently used common assessment. This is a dangerous recommendation to

consider in an era in which the most frequently heard complaint across the educational landscape is that students are over-tested. To be sure, many students are over-tested; but they are under-assessed. The distinction between testing and assessment must be clear. Testing implies an end-of-year, summative, evaluative, process in which students submit to a test and the results—typically many months later—are used by newspapers and policy makers to render a judgment about education. By the time the results are published, they are ancient history in the eyes of the student and teacher. Contrast this to the best practice in assessment, in which students are required to complete a task and then very soon—within minutes, hours, or days—they receive feedback that is designed to improve their performance. Effective assessment is what great music educators and coaches routinely provide to their students. Moreover, great educators use assessment data to make real-time decisions and restructure their teaching accordingly. The track coach, for example, does not use the previous year's data to make decisions about assembling relay teams or selecting students to compete for the state finals. Rather, the most recent data available is far more important than the final results from the previous year. Similarly, the data from last quarter on a school-based assessment is far more helpful than the data from last year's test. Common assessments also provide a degree of consistency in teacher expectations that is essential if fairness is our fundamental value. Although individual teachers must have discretion on a day to day and hour to hour basis to teach, re-teach, and otherwise meet the needs of individual students, they do not have the discretion to presume that their students "just can't do it." The use of a common assessment for each major discipline allows for a combination of daily discretion and independence by teachers, while preserving a school-wide commitment to equity and consistency of expectations.

The Value of Every Adult in the System

Eighth, these remarkably successful schools employed the resources of every adult in the system. In holistic accountability systems, we can explore the extent to which professional development is distributed among all adults in the system. In a few remarkable cases, for example, there is profound respect for every employee, including bus drivers and cafeteria workers. The respect for these employees is evidenced by their inclusion in professional development opportunities in classroom management and student behavior. Leaders recognized that the student's day does not really begin in the classroom, but on the bus or perhaps during free breakfast. By committing their systems to consistency in the education and behavior of adults, these leaders ensure that every adult leader, from the bus driver to the food service employee to the classroom teacher is regarded as a significant adult leader in the eyes of students. The language concerning student behavior, sanctions, and rewards, is consistent and the results are impressive. Concomitant with gains in student achievement, these schools witnessed dramatic improvements in student behavior, including a reduction of bus misbehavior and disciplinary incidents outside the classroom.

Holistic accountability (Reeves, 2001) reviews allow a consideration of other extraordinary performances, including those by school nurses, library/media center specialists, school secretaries, custodians, counselors, psychologists, security guards, and many other unsung heroes whose exceptional efforts are disregarded in the typical accountability report. While holistic accountability does not provide a cookie-cutter approach to school success, it does reveal the remarkable impact of every adult in the system on student achievement.

Cross-Disciplinary Integration

Ninth, there is explicit involvement of the subjects that are frequently and systematically disregarded in traditional accountability systems—music, art, physical education, world languages, technology, career education, consumer and family education, and many other variations on the these themes. Analysis of holistic accountability data reveals that the involvement of these seemingly peripheral subjects in academic achievement is neither serendipitous nor insignificant. Rather, there is a deliberate strategy of involvement in these subjects in the improvement of academic results for all students. A few examples will serve to illustrate the point. Teachers meet to review student achievement data at a deep level, including the sub-scale scores. The discussion is not that "math scores are low" but rather that "the sub-scales reveal that we need to work in particular in fractions, ratio, and measurement." This leads the music teachers to develop activities in which musical rhythms reveal the relationship of whole-notes, half-notes, and quarter notes. Art teachers work on perspective and other representational art that makes explicit use of scale. Physical education teachers allow students to choose to run either a millimeter or a kilometer, and when they make the wrong choice, it is a lesson most students remember well.

In a striking example of collaboration in Norfolk, the teachers in music, art, and physical education collaborated to teach a social studies unit about African studies and the nation of Mali, the home of many of the students' ancestors. Using dance, literature, vocabulary, geography, history, song, and other engaging activities that crossed disciplinary boundaries, the teachers took the Mali unit out of the shadows of the final week of school and infused it throughout the school year. It is hardly an accident that these students also displayed astonishing improvements in their performance on state social studies tests.

Other Urban Success Stories

Norfolk is hardly an isolated example of success in urban school systems. In Indianapolis, Indiana, the Wayne Township Metropolitan School Corporation is among many that has demonstrated that academic improvement is compatible with high percentages of minority and poor students in the student body. In St. Louis,

Missouri, Dr. Chris Wright and her colleagues have led successful initiatives in both Riverview Gardens and Hazelwood school districts. Now, under the leadership of Dr. John Oldani and Dr. Dennis Dorsey of the Cooperating School Districts of St. Louis County, these techniques are having an impact throughout the St. Louis area. In Los Angeles County and Orange County, California, urban, suburban, and rural school systems are collaborating to create significant gains in student achievement.

The Wayne Township results are particularly interesting, as they represent not only an example of successful accountability, but also the ability of a complex urban school system to replicate the success of other systems. The Wayne Township experience demonstrates that holistic accountability is not merely the result of idiosyncratic case studies, but rather the result of systematic replication of best practices from within and outside a school system. The demographic characteristics of Wayne Township might be those of any urban system, with 26 different languages spoken by the students, free and reduced lunch enrollment as high as 80 percent in some schools, and minority enrollment increasing in a number of schools to the point that a majority of students are from minority ethnic backgrounds in some buildings. What is unusual, however, is the relentless focus of this school system on collaboration, academic standards, and nonfiction writing at every level. In particular, the years from 1999 through 2003 represent an extraordinary effort to augment the state's accountability system with a district-based holistic accountability system. In addition to the state tests, the district administers pre- and post- tests for every student in the fall and spring of each academic year. For the year ending in June of 2002, every single school made significant gains in mathematics and language arts. In addition, the schools with the highest poverty levels made the greatest gains, perhaps because those schools displayed the most intensive focus on changing schedules, instructional practices, building-level assessment, and leadership. It was therefore no surprise that when the state tests were administered in the fall of 2002, every building displayed significant growth, but those buildings with the highest poverty levels displayed the greatest growth in academic achievement. These gains exceeded 20 percent in the case of several schools within the district.

Without a constructive accountability system, these results might be passed off as the temporary reaction to test preparation resulting from pressure from state authorities. The facts contradict such a presumption. Every school in Wayne Township tracked specific practices in leadership and teaching. In the case of those schools with the greatest gains, there were common assessments on a monthly or quarterly basis. In addition, faculty meetings and staff development sessions were routinely devoted to collaborative scoring of student work. Each of the schools had common scoring rubrics so that there were consistent descriptions of what the word "proficient" means in practice. Following the lead of the district, each school embraced the use of "power standards" so that teachers were able to focus on a few of the most important standards rather than every single standard established by the state. This is among the most important observations of this holistic accountability study: higher test scores resulted not from mindless test prep and frantic coverage of

every standard, but rather from the thoughtful application of the most important standards to creative and engaging teaching strategies.

It was noteworthy that the schools that had the greatest gains did not eliminate special area courses, such as music, art, physical education, and technology. Rather, these courses were explicitly a part of the academic preparation of every student. In schools with the highest gains, each teacher in the special areas was given the standards in mathematics and language arts in which students needed the greatest amount of help. Each of these teachers incorporated some of those language arts and math standards into their daily lessons.

Finally, the principal was personally involved in the evaluation of student work. The building leader regularly met with students and parents to discuss student achievement in specific terms. Moreover, the principals personally administered common assessments every month in language arts and math. By giving up faculty meetings, the principal helped to provide additional time for collaborative scoring of student work. The principal also encouraged every teacher to display proficient and exemplary student work in a highly visible manner. The result of these displays was that every student, parent, and teacher had a clear and consistent understanding of what the school-wide scoring rubrics meant in practice.

The Impact of Holistic Accountability on Equity

As impressive as the improvements in academic achievement were in Wayne Township, the gains in equity were nothing short of extraordinary. Figure 19.1 showed the typical negative relationship between poverty and student achievement. The more likely a school is to have high percentages of poor and minority students, the less likely the school is to have a high proportion of the students achieve academic proficiency.

The line extending from the upper left to the lower right shows that as the percentage of students in poverty (as defined by those eligible for free or reduced lunch) increases, the achievement (as measured by test scores) decreases. This relationship is not perfectly negative (-1.0) but it is substantial in most national research, ranging from -.6 to -.9. The prevailing assertion in more than four decades of research on the topic is that variables such as student poverty account for 90 percent or more of the variation in student test scores (Marzano, 2003). If we stop with a consideration of Figure 19.1, then these prevailing assertions will carry the day. The accountability evidence, however, suggests that there are specific teaching, leadership, and curriculum strategies that will mitigate the impact of poverty.

Figures 19.2 through 19.5 indicate that the negative relationship between student poverty and student achievement is not a certainty. Although the grade 6 language arts scores are disappointingly negative (- .35), in both grades 3 and 6, the relationships between poverty and achievement are far lower than is the case

nationally, and in three out of four examples, the relationships are almost flat. In other words, this school system has demonstrated that the relationship between poverty and student achievement can be negligible.

Figure 19.2

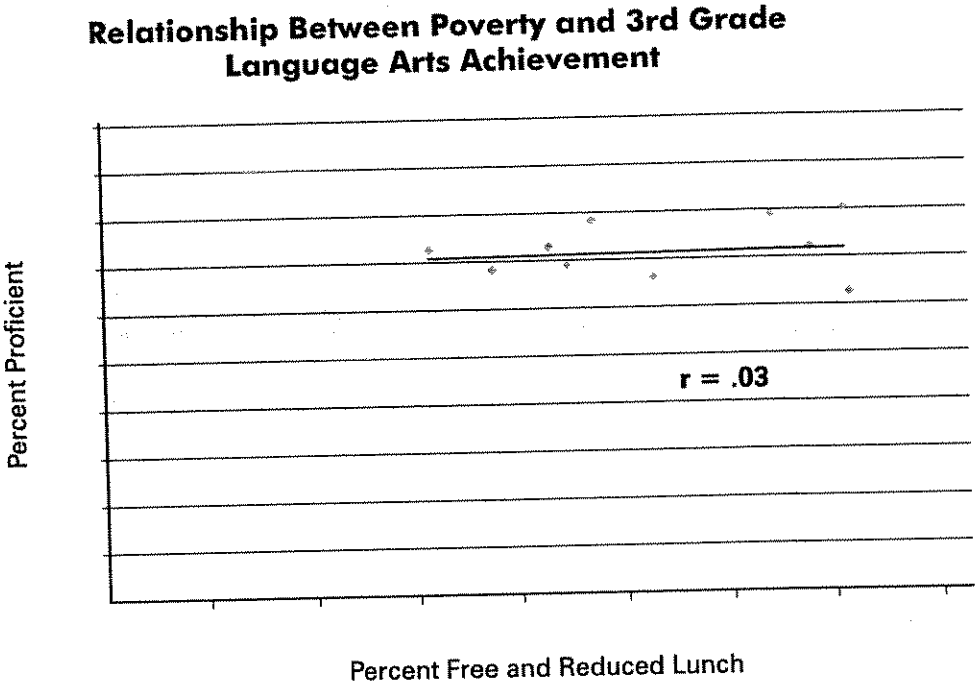
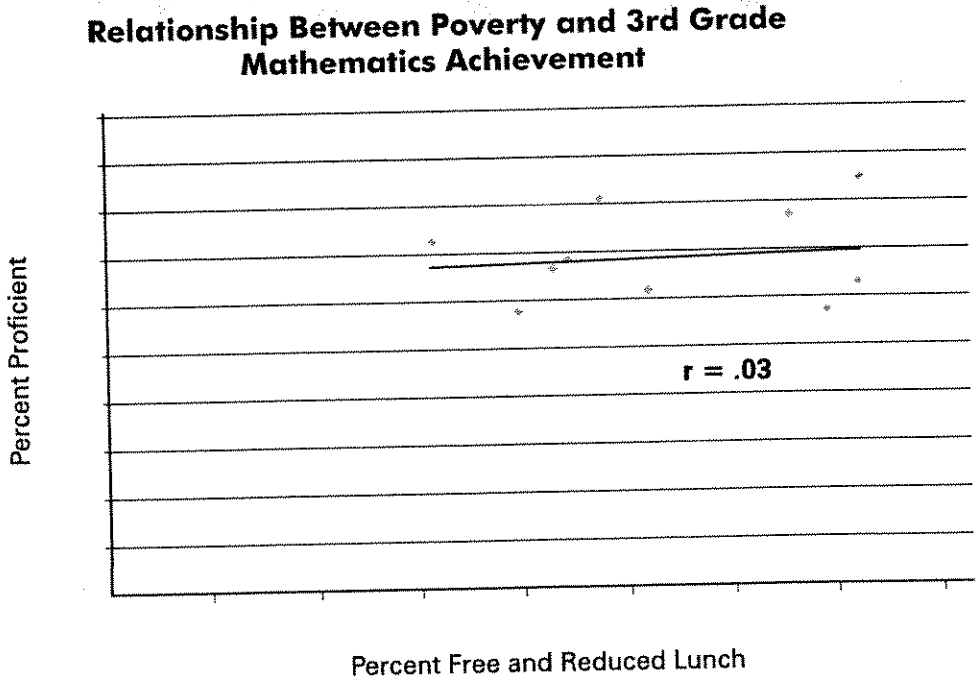


Figure 19.3



Equity Need Not Be A Dream

The Wayne Township experience demonstrates that equity need not be a dream. Every single building in the district—elementary through high school—achieved one of the following two equity indicators: The difference between students eligible for free and reduced lunch and the average was less than 10 percent, or the difference between the largest minority group of students and the average was less than 10 percent. These data points are totally consistent with the improvements in equity in Milwaukee, Freeport, Riverview Gardens (St. Louis metropolitan area), and others.

While no one disputes that poverty, linguistic differences, and culture can be important variables influencing student achievement, the research is clear that variables in teaching, curriculum, and leadership are profoundly important. In fact, these variables, that teachers and leaders can control, are more influential over student achievement than the intractable variables of poverty, culture, and language.

Figure 19.4

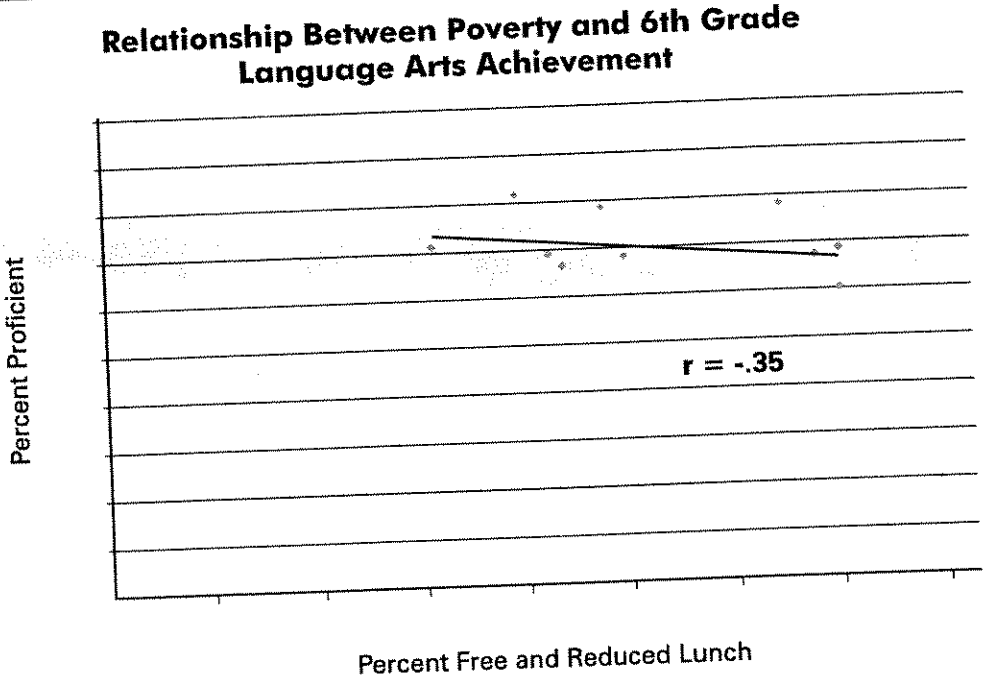
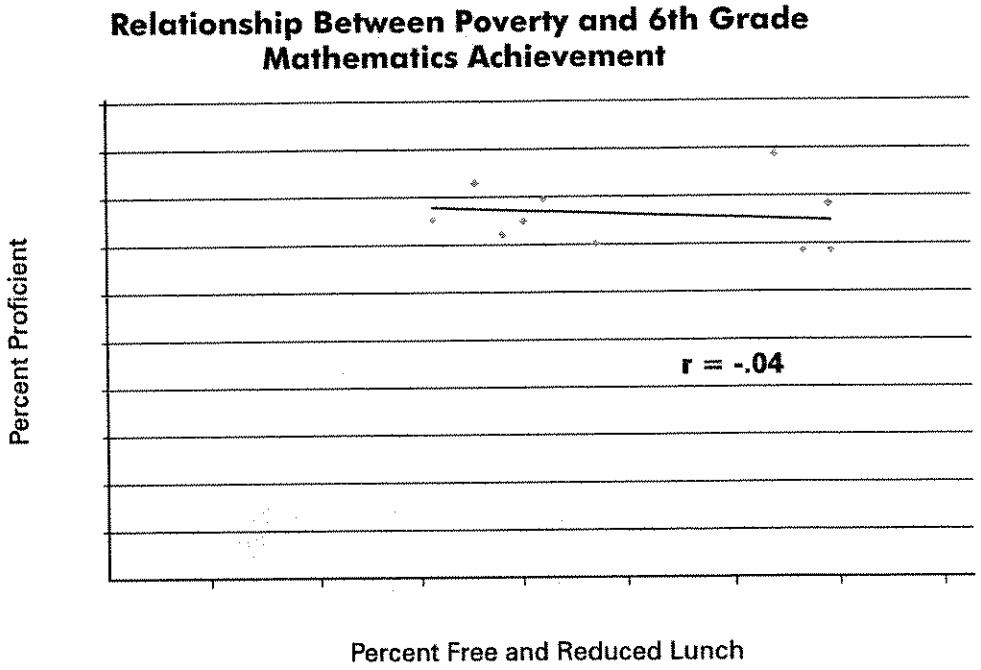


Figure 19.5



Critics, Cynics, and Urban Education Success

We must take a few minutes to address the inevitable critics who appear to be constitutionally unable to believe that a success story in urban education exists. Whenever I share results such as those in Norfolk, Wayne Township, Milwaukee, Riverview Gardens, Freeport, or other successful urban schools, critics inevitably roll their eyes and allege that this surely must be a flash in the pan, the product of a frenzy of test preparation rather than sustainable reform. Others have claimed that the results must be due to the exclusion of under-performing children on test day. Still other critics claim that the students and teachers must be engaged in a massive cheating conspiracy. Others take issue with the methodology of the research, particularly if careful research controls (such as mobility and attendance) are used. The presence of those controls inflates achievement, the critics charge. After all, the studies reflect students who actually attend school. Of course, the absence of those controls would lead to charges of sloppy research. Either way, the critics find a way to ignore the continuing pile of research, of which my studies represent only a few pebbles. Marzano (2003) has assembled the most impressive evidence, using meta-analytic techniques that indicate the importance of teaching, curriculum, and leadership relative to poverty and ethnic identity. Demographic characteristics are relevant, but the preponderance of the evidence indicates that these characteristics are not destiny when it comes to academic achievement. The following is a brief consideration of challenges that I have heard made to the 90/90/90 research:

The only measure of success in this study is test scores, and there are better ways to assess student achievement. Test scores are a way, but by no means the only way, to assess student achievement. It is interesting that one of hallmarks of the 90/90/90 Schools was an unwillingness to tolerate annual state or district tests as the sole measurements of achievement. These schools consistently elevate the importance of classroom-based, teacher-made tests that are collaboratively scored and used to provide immediate feedback to both students and teachers. From a research and policy perspective, however, it is necessary to have some consistent data in order to understand student achievement. While accountability should indeed be a holistic endeavor with multiple assessments of achievement, common tests of literacy and mathematics are useful to evaluate student achievement over time. Finally, the best accountability systems, including the one used in the original 90/90/90 research, included a balance of state, district, and school-based measures. Moreover, it included a narrative report from each school, providing a balance of qualitative observation and quantitative data.

The excessive time devoted to reading means less time for science and social studies. This is true. Schools in the study were required by state law to take science and social studies tests, yet they made a deliberate trade-off to devote more time to reading comprehension and nonfiction writing, even if it meant that they had fewer hours of social studies instruction. This trade-off was wise for two reasons. First, their scores in social studies and science did not decline, but increased. One can speculate that it might have had something to do with the improved ability of students to read and understand the questions on the social studies and science tests. Second, our interviews of social studies and science teachers at the secondary level revealed their nearly unanimous conviction that the key to greater success in those disciplines at the secondary level was not more social studies and science instruction in elementary school, but students who could enter secondary school able to read on grade level. A substantial body of research (Foersterling and Morgenstern, 2002; Klentschy, Garrison, and Amaral, 2000) supports the teachers in this conviction.

The controls for attendance and mobility provide a positive bias for 90/90/90 Schools. This is not true. The accountability system provided "two-column" reporting for students in order to display the impact of mobility and attendance. In one column, the report shows the results for all students, and in the next column it shows the results for those students who were continuously enrolled during the school year. For attendance, the "all student" number was separated from the results for those students who attended school at least 90 percent of the time. These controls were made for all schools, not just the 90/90/90 Schools. Therefore, a parallel comparison was made to high poverty, high minority schools for students with good attendance and continuous enrollment, but who did not have the success of students in the 90/90/90 Schools. This is just good research design. In pharmaceutical research, we compare patients who receive the medicine (the experimental group) to those who receive a placebo (the control group). The research is only useful if those in the experimental group really take their medicine. If we are studying the impact of certain strategies in curriculum, teaching, and educational leadership, our research is of questionable value if we analyze the effects on students who were not present

for the curriculum, teaching, and leadership strategies. Finally, it was noteworthy that the schools that had high mobility (as defined by more than 80 percent of students taking the spring test not enrolled in September) and also high achievement, had strikingly similar characteristics to the 90/90/90 Schools, with an emphasis on writing and collaboration.

The 90/90/90 Schools used expensive programs, such as Success for All. This is not true. Some schools used Success for All, and others did not. This makes emphatically clear that the brand name alone of a literacy program is not the predictor of success, but rather the professional practices employed by teachers and leaders in the building. In fact, some Success for All schools had high results, while others had poor results. It was the replicable professional practices, not particular programs, that were associated with student success.

The effects are transient and dependent upon a particularly effective principal and faculty. This is not true. The effects are sustainable, with some schools maintaining this designation through different principals and high faculty turnover. The effects are replicable, with schools in other places (where there is also high turnover and teacher inexperience, particularly in high poverty schools). In the words of one teacher in the original study, "nobody volunteered to come to this school." Nevertheless, their collaboration, focus, and professional practices delivered results.

Conclusion

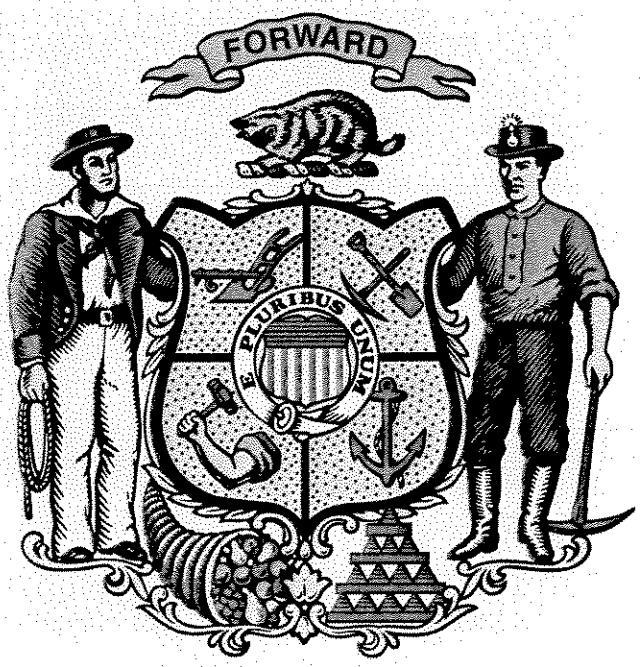
Perhaps the most compelling argument against any research about success in high poverty schools is the observation that there are cases where teachers are doing all of the right things, and yet student achievement remains low. There are no magic potions to deliver improved student achievement. The best that researchers and policymakers can do is to examine the preponderance of the evidence and draw appropriate conclusions. When a jury is presented with the evidence in a court case, it rarely has a perfect data set with unquestionable research. Rather, the jury confronts conflicting information, including information with errors, uncertainties, and differing interpretations. From this mix, we ask twelve people of good will and common sense to draw an appropriate conclusion based on the preponderance of the evidence.

The 90/90/90 research and the other evidence offered in this article fall far short of perfection. It does, however, contribute to the larger body of evidence that, in its totality, suggests useful strategies for high poverty schools. Moreover, in any research project, we must recognize that perfection is not an option. Rather, we can only choose among the errors that we commit, and attempt to minimize the risk of our errors. From a research perspective, we must choose between the risk of confirming a hypothesis that is not true and the risk of failing to confirm a hypothesis that is true. In the case of the professional practices recommended in this

article, we also have two potential errors. One error is the replication of these practices, including an increase in our commitment to literacy, nonfiction writing, and collaboration, and the subsequent discovery that the students really did not need all of that extra work after all. What is the risk of this strategy? Excessively literate students? Teachers who collaborate too much? The other error is the failure to act while we search for perfection or persist in a state of disbelief. Risks attendant with such delay will be debilitating for another generation of students. I do not claim that the 90/90/90 research and its many counterparts in the literature are perfect. I only suggest that the risks of this research being wrong are minimal. The risks if the research is correct and ignored are grave.

Questions for Discussion

1. What implications do the research findings on "90/90/90 Schools" have for your school or district? How would you implement these in your school or district?


FORWARD
E PLURIBUS UNUM

[May 2005]

The Lesson

Nowhere in the United States is the achievement gap between black and white students wider than in Wisconsin. Why some poor African-American kids outperform their white peers while others struggle.

On the day Dante Hamilton came to Nathaniel Hawthorne Elementary School on Milwaukee's North Side, he was like most African-American children who enroll in urban school districts in the United States. He was already behind.

Never mind that he was barely 4 years old. White students across the country and in Milwaukee's early kindergartens already had the upper hand.

The average black child starts kindergarten 21 points behind in math, according to the U.S. Department of Education. If the students are poor, the gap is even worse. The lowest socio-economic group begins school 60 points below the highest. And in Milwaukee, 48 percent of black children under age 5 live in poverty.

White kindergartners start with a lead. They better understand concepts needed for learning, such as "over" and "under," "above" and "below," and then sprint ahead.

But as Dante's classmates sat ready to learn, he literally turned cartwheels on the carpet.

Had he been a typical poor black student in an average urban school, things would have gotten worse from there. By sixth grade, he might be like a lot of African-American boys in Milwaukee and drop out of school. Or maybe he'd wait until after eighth grade, when there's another rush for the exits. When high school graduation rolled around, more than half of the boys like Dante would be gone.

Whether a child will graduate from high school is really determined years earlier. By examining test scores, absences and behavior at the end of third grade, it's possible to predict which children will not graduate nine years later. That's why our investigation focuses on elementary schools.

But much of the emphasis on closing the gap is on high schools. Milwaukee, for example, is spending $17 million from the Bill & Melinda Gates Foundation to create smaller and hopefully more effective high schools.

"The great American tragedy is the billions being spent on high school reform," says former Milwaukee Public Schools Superintendent Spence Korte. It's like "doing CPR on a dead man," says the national education consultant, who left the district in 2002. Better, says Korte, to spend the money on children like Dante when they first start school.

Today, this black/white achievement gap – there is one between white and Hispanic kids as well, though it's not as wide – remains the bedrock of discrimination in the United States. It keeps kids from ever becoming full players in society, from getting the education and jobs that will make them equals.

Nowhere is the gap wider than in Wisconsin. By fourth grade, the disparity between black and white students is the worst in the country in math. By eighth grade, the dubious distinction includes reading as well.

In 2003, 76 percent of Wisconsin's black eighth-graders scored "below basic" in math and 60 percent in reading (for whites, it was 18 percent in math, 17 percent in reading).

"Wisconsin continues to have the biggest gap in the nation between black and white high school graduation rates," says researcher Marcus A. Winters, co-author of the well-known Manhattan Institute for Policy Research's high school graduation study released in February.

According to the study, the graduation rate for black children in Wisconsin is 50 percent. The rate for white students is 91 percent. "That 41-point gap makes Wisconsin number one in the nation, followed by New York at 39 points," says Winters.

The heart of the gap is in Milwaukee, where two-thirds of the state's black students enroll in the country's 29th largest school district, making up 60 percent of MPS' 97,760 students.

So few MPS students graduate in four years that the district can't calculate graduation rates the way the institute does, says Tim McElhatton, an MPS statistician. How could it? "One in four MPS ninth-graders is repeating ninth grade," he says.

But even with the state and district's more generous accounting, only 47 percent of MPS' black males graduated in 2002-'03 (the most recent data available).

Fortunately for Dante, he had what the Chinese call the luck of time and place when his mother enrolled him at Hawthorne. Today, at age 10, he is a fourth-grader who reads at a sixth-grade level.

He no longer wears the special-education label once applied to him. And he's aiming for higher things. He's already made the honor roll and perfect-attendance roster.

There are a lot of success stories like Dante's at Hawthorne.

Hawthorne's poor black students – 92 percent of the student body is African American and 88 percent of its students qualify for free or reduced-cost lunches (a standard measure of poverty among school children) – frequently outperform the district's white students on achievement tests.

But 16 blocks away at Thurston Woods Elementary School, the kids aren't so lucky.

The schools have the same taxpayer support, identical union contracts, an equal percentage of poor kids and those in special education. But while Hawthorne's kids regularly score higher than the district's white students on achievement tests, Thurston's students struggle to reach even the much lower average for the district's African-American students.

Last year, 81 percent of Hawthorne's black fourth-graders scored proficient or above in math and 79 percent proficient or above in reading, compared to 34 and 63 percent, respectively, at Thurston Woods.

Yet it would be hard to find two schools more alike. That's what provokes the question: How can two schools so similar be so different in achievement?

It is a touchy question for the school district and for underperforming schools like Thurston Woods.

Thurston Woods principal Willie Fuller chose not to give us access, citing "problems" she was having with some veteran teachers who, she said, "think they're smarter than me and ready to take over."

Yet Hawthorne's school governance committee opened its doors. "I am proud of what our students and staff are accomplishing," says principal Bettye Washington.

Experienced educators say you can tell a lot about a school merely by walking inside and spending a little time there. We visited Thurston Woods on four occasions and interviewed a total of seven present and former staffers. Then we talked to a half-dozen local educators familiar with the school.

The approach isn't ideal, but it revealed some stunning differences that should alter the way we think about closing the gap. In the past, it's been popular to blame teachers for the achievement gap, berate stingy taxpayers, irresponsible parents, even the kids.

But Hawthorne and Thurston show that closing the gap takes more than finger pointing.

The Gap

We've known about the black/white achievement gap since World War I. Today, more than ever, it is a problem with wide-ranging implications.

"It isn't just an education issue anymore," Elizabeth Burmeister, state superintendent of schools, told 1,300 attendees in January at a conference she organized on "Closing the Gap." "It's a moral and economic one."

In fact, Wisconsin's chief economic adviser, Terry Ludeman, says, "There is nothing more important" to the state's future "than addressing the educational attainment levels of African-American males."

Two things have created a new sense of urgency: the demographics behind the Social Security crisis and the No Child Left Behind Act of 2001.

The first may seem unrelated, but as Willard Daggett, president of the International Center for Leadership in Education, told the "Closing the Gap" audience: "If you think there's this God-given right that you're going to get teacher's retirement and social security, you are goddamn naïve. Three people are retiring for every new entrant into the workforce, and 53 percent of those people we baby boomers want to work to provide our retirement will be minorities who have had little success in the American educational system, and these people have to face global competition for jobs," he said.

Until now, people have avoided focusing on the achievement gap, says Kaleem Caire, who commissioned the first Manhattan Institute achievement gap study in 2001 as president of the national Black Alliance for Educational Options. "It wasn't just white politicians. A lot of black people were afraid of how people would use it… afraid they'd say black children are genetically inferior."

Studies have shown that's not the case. Poverty explains the majority of the pre-school gap, though things like low birth weights, single-parent homes, very young mothers, frequent moves, fewer books and lead paint exposure may all play a role.

The kids at Hawthorne and Thurston Woods know these things firsthand. Many have never seen their birth parents. Some parents are in jail, others addicted to alcohol or drugs. A lot of the kids are being raised by their grandparents, great-grandparents and other relatives. Some are in foster homes. Others have no homes and live in temporary shelters, says Hawthorne social worker Donna Simmons.

One Hawthorne student lived in an empty warehouse with a 2-year-old for five weeks until McDonald's staff saw him scavenging for food in the dumpster.

"Most of these kids were not born alcohol or cocaine addicted. I came with that assumption, but it's not true," says Simmons. "A lot of these kids are raising themselves. The parents aren't negligent; they're working and trying to survive, for the most part."

Long-term goals like an education seem remote and irrelevant, says Tyrone Dumas, vice president of the Metropolitan Milwaukee Alliance of Black School Educators. How do we make it relevant and close the gap?

Until recently, education has been more art than science, says Tom Loveless, director of the Brown Center on Education Policy at the Brookings Institution, a pioneer in achievement gap research. "It's where medicine was in 1899. We're still doing the equivalent of leeches.... We've been slow to adopt best practices, but it's starting to matter now whether you teach kids how to read."

That's because the No Child Left Behind Act (NCLB) now holds districts, schools and teachers accountable for seeing that all students make adequate yearly progress toward the goal of having every child – minority, special education and even non-English-speaking students – at grade level in math and reading by the 2013-'14 school year.

In Wisconsin, if there are 40 or more kids in any one of those groups in a school or district, the law applies, and a school that fails repeatedly to make progress winds up on the list of schools that need improvement.

If the school receives federal Title 1 money for poor students, as most Milwaukee schools do, the law requires parents to be notified and schools and districts to take costly corrective action. If after five years all of that fails, the school is shut down.

NCLB offers no carrots to reward success, and the real "stick" is the media labeling "schools in need of improvement" as "failures," says Mike Thompson, federal policy adviser for the Wisconsin Department of Public Instruction. "No one wants to be on the list of failing schools."

In Wisconsin, 51 schools are currently on the failing list, including 43 in MPS. The law helped focus attention on the gap, and some cities, including Houston and Boston, have had amazing success.

"It all goes back to school leadership and a management style that brings people together to focus on the goal," says Nancy Noeske, president of Milwaukee-based PROACT Search Inc., which helps school boards across the country hire superintendents. "Closing the gap is not rocket science."

Milwaukee made strides the first year after NCLB was passed, too. But while its fourth-grade gap narrowed, the math gap at eighth and 10th grades widened substantially. The reading gap in the upper grades remained unchanged.

We already know some of the ingredients needed to close the gap: high expectations, an emphasis on learning and the use of a rigorous curriculum focused on basic skills like reading and math. Controlling behavior and keeping kids on task and engaged in academics is another part of it. "It sounds like common sense, I know," says Loveless of Brookings Institution.

It also takes parental involvement, frequent testing and help for kids having difficulty. When it comes to poor and minority kids, a teacher-student ratio of 1:15 or lower makes a big difference.

"Closing the Gap" speaker Daggett, who has studied successful schools in every state and 29 nations, says the secret is the "Four Rs": rigor, relevance, relationships and reflective thought. The last consists of "guiding principals," best taught in kindergarten – values like responsibility, initiative, perseverance and respect.

Beyond that, things get tricky. All of the above won't necessarily turn a bad school into a good one, Loveless cautions, because "you have to have the teachers on board."

And "you don't get good results in a school without a serious partnership between the principal and the teachers. They won't 'own' the kids and their achievement," says Korte, a veteran of three decades in education.

So job number one is conveying a vision and winning the confidence of the school community. That's where Hawthorne's Bettye Washington began.

Hawthorne

In 1989, MPS assigned the then-39-year-old Bettye Washington to Hawthorne Elementary School at 6945 N. 41st St. The school's previous principal had been on an extended sick leave, and rudderless, Hawthorne had drifted into a state of anarchy. Children swore and shouted angry invectives at teachers. "Parents were coming into class in the middle of the day cursing, accusing teachers of being incompetent, insensitive racists and threatening them," Washington remembers.

The possibility of physical violence became so convincing that one teacher refused to come to work without a teachers' union escort. "There were some serious safety issues," recalls Washington, who approached the parents first. She formed a "school climate committee" and got parents involved. Then she separated her staff into two groups, those who loved teaching and those for whom it was merely a job. She counseled the latter to leave the profession.

Washington nurtured the others, matching their skills to jobs that suited them best, she says. She set three priorities: "Focus on instruction. Make the climate amenable to success. Make parents feel welcome." Hawthorne's transformation had begun.

Today, the school has a warm, open, caring environment. It isn't just the big sign outside welcoming parents and visitors or the cheerful greetings once you're inside. Teacher turnover is rare, and kids often cry when they graduate. "This is one of the most bonded, collegial schools I've ever seen," says Sandra Martin, a veteran educator who coaches schools on classroom discipline for MPS.

"You have to have a real solid relationship with people if you're going to handle tough problems together," says Washington. As a new principal, she'd go into her office, shut the door and do her work. "I didn't realize how important it is for the staff to get to know each other and have fun together."

She's refined her management style since then. Celebrations are almost a regular part of the curriculum now, as are team-building activities ranging from a staff outing at a trust-building ropes course to the Friday potluck get-together.

Like Lee Iacocca at Chrysler in the 1980s, Washington keeps Hawthorne in a continuous state of improvement, and nowadays she is seldom in her office during the school day. She's down the hall talking to teachers, huddling with individual kids, dispensing hugs or planning strategies like "double dosing" all of the kindergartners with a second daily reading lesson so that by the time they get to first grade, they'll be a year ahead.

"This is not a place where you come in and close your door," she tells new teachers. "We work together here."

She has also cultivated at least a half-dozen emerging leaders in the school who help carry her vision forward.

"Student peacemakers" and "hard workers" are heralded on the bulletin board outside of her office, alongside the honor roll and those with perfect attendance.

It doesn't take newcomers long to realize there's something special about Hawthorne. "I felt like hugging people at the end of my first week," says special-education teacher Kim Anderson, who moved from Chicago in 2003. "This is the first job I ever had where I love getting up in the morning."

"I think our kids know we truly love them," adds kindergarten instructor Laura Sockett, Dante

Hamilton's first teacher at Hawthorne. But love isn't enough, says Washington. "It's setting a child in the right direction so they can have a decent future." And there, Hawthorne has one clear vision: Every child will learn, and it is everyone's job to find a way to teach them.

Teachers and assistants are expected to hone their craft, and Washington provides a steady stream of coaching and advice from experts. Each teacher is also assigned a buddy, and if any of a teacher's students are struggling, it's the grade-level committee of their peers and the school learning team's responsibility to step in and help.

With literacy coach Carolyn Wesley (twin daughter of TV weatherman Paul Joseph) and math specialist Annette Perry, Washington studies the tests students take after every five lessons to identify any child who hasn't mastered 80 percent of the material, then gets them help.

Speedy intervention is crucial. If a child falls behind and has to repeat a grade, their chances of graduating from high school drop dramatically. Being held back once increases the dropout risk 40 to 50 percent; a second time increases it 90 percent.

Hawthorne's efforts are paying off. Last year, 93 percent of the school's African-American fifth-graders scored at or above proficiency in math – 48 percentage points higher than the district average for African-American students and 16 points higher than the average for white students.

Hawthorne's black fourth-graders scored at 80 percent proficiency or better in every subject area, beating the district average for black students by as much as 36 percentage points. Ninety-eight percent of the school's black third-graders scored proficient in reading.

"I don't want you to think we're perfect. We're not," says Washington, fretting that some fifth-graders are struggling with math.

Since the early 1980s, people have been thinking up new things for schools to teach. Hawthorne's students once made items to sell as part of the school-to-work program. But Hawthorne jettisoned the frills to focus on the basics, especially reading.

Says former Superintendent Korte: "The more we learn about why kids drop out, the more it gets back to they couldn't read."

Washington believed it was important to teach all kids to read, and she became one of the first principals to mainstream special-education students. Feeling they'd been "truly isolated and segregated," she told staffers that if they didn't like it, they could leave. She brought in experts to ease the transition and to explain how inclusion would work to students, staff and parents – with extra teachers' aides and roving special-ed teachers.

"We didn't have people say it's not my job," she says.

Washington wasn't thinking only of the kids. Most special-education teachers don't last more than five years. They burn out "because they don't get the support they need," she says. With inclusion, they did.

Still, in the mid-'90s, many of Hawthorne's mainly poor and black students had not overcome their initial disadvantage.

At the end of first grade, Dante's speech problem had improved, but his reading was still a year behind. Most schools would have held him back a year. Instead, Hawthorne's literacy staff, his teacher and his mother arranged for extra coaching. Between first and second grade, Dante blossomed.

But a disturbing 30 percent of the school's first-graders were below grade level when they were promoted to second grade. Washington heard about a program that had kids reading before they left kindergarten. Her teachers were interested, but she didn't have money to implement it school-wide. So she focused on kindergarten.

The district wasn't wild about starting academics so early, but Washington did an end run and convinced the School Board to expand Hawthorne's kindergarten to a full day and include the new program.

In fall 1998, Hawthorne began its first experiment with a controversial teaching tool known as Direct Instruction. More than 25 years of research show that DI works, especially with disadvantaged children. It is one of only two reading programs that can make that claim, yet it remains controversial.

At the state's "Closing the Gap" conference, it was possible to hear DI described as both the best thing since the McGuffy Reader and a dangerous cult (the enthusiasm of true believers who've seen its results can be off-putting).

DI provides teachers with detailed scripted lesson plans heavy on drilling and repetition that emphasize phonics. "All students, if properly taught, will learn" is its mantra.

For more than 20 years, colleges de-emphasized phonics in favor of softer, fuzzier, "more interesting" whole language; teachers educated during the period complain that DI stifles creativity because it's scripted.

But the curriculum doesn't stop at phonics. Last winter, some Hawthorne fifth-graders analyzed which of several weight loss techniques worked best and converted meters, grams and liters to kilometers, centigrams and milliliters. Others reviewed vocabulary words: crestfallen, indifferent and ghastly, then underlined adverbs and circled verbs. Second-graders wrote directions for how to play basketball, while 8-year-olds graphed the size of city parks to find the largest.

"DI is far more complex than it looks, and teachers must know why they do things one way instead of another," says University of Wisconsin-Madison special-education professor Sara Tarver, who edits a DI newsletter. "There are important strategies and behavior management techniques to learn."

Hawthorne discovered that the hard way. A year after implementing DI, only 40 percent of students tested proficient in reading. "If you don't have coaching, if the teachers don't buy in and it's not reinforced by getting the test data to the teachers, it's not going to work," says literacy coach Wesley.

Hawthorne won a grant from the state and hired a DI coach. Soon, teacher Laura Sockett was telling her peers how much her kindergartners "just loved getting smart."

Hasaan Love, a kindergartner with a severe language delay, became a DI poster child. He barely spoke 10 words, and all of the teachers were stymied. Was he autistic? But Hasaan took to the DI drills. He brought vocabulary words home to practice. "Now, he won't shut up," says his grandmother, Bridget Rainey, who is such a Hawthorne fan that she became a full-time volunteer.

On the strength of stories like Hasaan's, Hawthorne implemented DI throughout the K-5 school.

A well-executed DI curriculum cuts down on special-education referrals, transforms rowdy classrooms into models of decorum and allows students and teachers to spend more time on academics. We witnessed that on repeated visits to Lila Lyles' third-grade classroom. As she reviewed multiplication tables, her students sat attentively. And though she never raised her voice, she commanded the room. Students repeated the multiplication drills out loud, quickly and enthusiastically. No one acted up.

Walking around the room, Lyles called one child "sweetheart" and gave hugs to several others. Her class of 17 includes five emotionally and behaviorally disturbed boys and another who is cognitively disabled, but it was impossible to pick them out.

Every morning, Hawthorne's teachers teach DI reading at the same time, making it easier to group kids by ability since they can move down a level to catch something they've missed or

ahead when they are ready. There are eight different ability groups in first grade alone.

Having reading classes spread throughout the day would make it easier for a DI coach to work with more teachers, but Hawthorne isn't about making school more convenient for adults. It's about making it work better for kids.

"If there is something we need to help our kids succeed, Ms. Washington will find a way to get it for us," says veteran third-grade teacher Ruby Sanders. With aid from the school governance committee, Washington hired a teacher's aide to help an overwhelmed kindergarten teacher with a class of 35 4-year-olds.

But such interventions are difficult financially. Ninety-five percent of the money spent per student in the district is now allocated to the school, but after Washington totals the portion that goes to pay teachers' salaries (average pay in the district is $50,000, plus the cost of benefits – 63 percent of salary or an average of $36,500), there won't be much left, says Washington.

She talks of "the glory days" when Hawthorne had both an assistant principal, an implementer to plan activities and a half-time guidance counselor. All three are gone, and she doesn't know how long she can keep the school's specialists who teach computer lab, art, music and physical education.

Despite the difficulties, Hawthorne hasn't stopped improving student achievement. That's because some of its staff are remarkable job jugglers. Educational assistant Sonya Bullock, the only staffer remaining from the "old" Hawthorne, runs the library, helps with the before- and after-school programs and oversees parent-teacher events.

Hawthorne doesn't stop there in elevating student achievement. It uses every trick in the book:

• Four years ago, the school began encouraging voluntary school uniforms, white shirts and blue pants, which "cut down on behavior problems, put-downs and teasing," says Sanders.

• Hawthorne's Brothers of Unity, a group of six male teachers, mentors 24 male students. On Thursdays, they wear the school uniform and red ties and eat together in the cafeteria. Sisters of Destiny counts 15 mentors and 30 female students. Membership is by invitation and made to older kids who need a little extra guidance. Parents must approve. Meeting topics include things like "how to avoid bad influences," says teacher-mentor Kelly James.

• Camp Hawthorne offers before- and after-school care from 7 a.m. until 6 p.m. "We have a lot of these kids for more of the day than their families do," says camp co-coordinator Nadine Duke.

• In 2001, Hawthorne adopted a year-round calendar. The staff and students meet 180 school days, as do other MPS schools, but it's spread throughout the year so kids forget less. Two-week intersessions include math and reading drills, storytellers and field trips. The fee is just $5.

Hawthorne has come a long way, says Debra Hamilton, Dante's mother, who now chairs the school governance committee. Parents never complain that their children aren't respected now, she says. "The staff teaches everyone that you need to show respect to get respect."

Thurston Woods

Like Hawthorne, Thurston Woods School is located on the city's North Side, at 5966 N. 35th St., in an area of small, single-family homes. Ninety-four percent of its students are African American and 88 percent received free or reduced-cost lunches.

Each school is headed by a female African American who's worked for the district for more than 25 years. Each has been principal at her school for at least nine years. Both use the DI curriculum.

Yet last year, Thurston's black third-graders scored below the district average for African-American students in math and 34 points below the white student average. Its black fifth-graders fared no better. They remained below the district average for African-American students and below its white students in math and reading by 39 and 25 percentage points, respectively.

What explains the difference?

Experienced educators say you can tell a lot by the friendliness, the way you are welcomed at a school. Thurston Woods was not a welcoming place.

"Almost every school that's in trouble reveals itself, even before you start looking at test scores," says Korte. "If the principal is hiding in her office instead of being visible and larger than life, you know. If the teachers are hiding in their classrooms with the doors closed, you know," he says. "If the principal doesn't value and support the teachers, the magic doesn't happen."

Korte's description was so insightful that it was as if he knew the school. He does. Thurston has been "a known disaster area" to district officials for years, he says.

The year after Korte left the district, Thurston's faculty gave principal Willie Fuller the equivalent of a no-confidence vote. It was 2003 and the Milwaukee Teachers Education Association had hired the Public Policy Forum to oversee a survey that asked MPS teachers about their principals.

Thurston's faculty was over six times more likely than the average elementary school staff to say "the principal makes decisions with little or no input from staff."

The seven present and former staffers interviewed referred to Fuller either as a "dictator" or "drill sergeant" who rarely leaves her office and who rules by intimidation.

But Fuller says, "I want to make sure teachers are teaching and children are learning. If that's called 'ruling with an iron fist,' I'm guilty."

When we asked staff what was the most important thing at the school, they didn't say "learning," as Hawthorne's teachers had. Invariably, they said, "This is Ms. Fuller's school; nothing happens without her permission." And "if something's not [her] idea or one of her 'favorites,' it's a bad idea."

Jesse Brown, who teaches a combined sixth- and seventh-grade class there, recounted how a group of black male teachers wanted to form a mentoring group to teach "manners, respect, personal hygiene and etiquette" to "some of the African-American kids we know that don't have dads in their lives and hardly see their mothers. Kids who are angry all the time," he says. Because it wasn't the principal or her supporters' idea, "it got shoved out," says Brown, who is leaving to start a charter school.

In fact, the seven Thurston staffers to whom we spoke believe that industry and initiative are actually punished at Thurston.

Several teachers told us about an incident involving the school's physical education teacher. A veteran teacher relatively new to the school, she had taken it upon herself to include special-education students in a regular physical education class. The district's own guidelines recommend exactly that, but when Fuller found out, she dressed down the teacher in front of the kids and her colleagues. With the teacher close to tears, Fuller uttered one of her infamous lines, say staffers: "Do you get that?"

"She talked to the teacher like she was her child," says Jade Cottrell, a special-education teacher now working at another MPS school. "It was just heartless."

Several months after assistant teacher Francesca Gabriel came to the school last fall, she joined the "Sunshine Club" and began organizing a staff Christmas party. "Everyone was so happy because they never had one before Christmas," she says. "People told me, 'Good

luck,' but nearly everyone signed up." When Fuller found out, Gabriel says, "She was furious. She said, 'Don't do anything around here without my permission.' I said, 'Okay, I'm new.' But I asked her, 'Will you come?' And she said, 'No. I don't have time.'" It was a long way from Hawthorne's team-building celebrations.

"To survive at Thurston, you have to go into your room, shut the door and never talk to anyone," says Brown. After her encounter, the physical education teacher did just that.

"No one felt their opinions were received, much less respected," adds Cottrell. "Being at a different school now, I see why Thurston Woods' teachers had no motivation."

Some, however, were motivated to leave. A perennial problem in closing the gap is the inability to keep experienced teachers. "We don't have a shortage of good teachers – it's a turnover problem. And it's not money that's the big thing," says Christine Anderson, who, as executive director of the Milwaukee Partnership Academy, has helped MPS implement learning targets, literacy coaches, school learning teams and other crucial changes.

"If teachers don't feel they are being supported or that their voice is being heard, they leave," says Anderson.

Last fall, a study by the Center for American Progress identified four top reasons teachers leave urban education. Leading the list were the Thurston teachers' complaints: inadequate support from school administration and limited faculty input into school decision-making. The others were student discipline problems and too many intrusions on classroom teaching time.

MPS doesn't track turnover by school, but Thurston's teachers average 5.7 years in the district compared to 8.3 years at Hawthorne, a number closer to the district average.

"Good Thurston teachers have been leaving for years, and the kids suffer," says Gabriel. "Black males, the ones these kids need the most for role models... those are the ones she drives out.... So you're left with the burnt-out people who dance to her tune or new people who don't know anything."

Researchers who study school culture look for stories that help explain how things work in an organization. Six of the seven teachers we talked to recounted the following:

The staff was meeting for a presentation on the importance of a positive school culture. At the end, the outside expert prodded Thurston's teachers, asking why they didn't have any questions or comments.

Finally, a young first-grade teacher blurted out, "Maybe it's because people feel that if they speak up, action will be taken against them," recalls Cottrell.

"Ms. Fuller just went after her," he says. "But the teacher said, 'This is exactly what I mean.' And Ms. Fuller said, 'We're not going to talk about this now,' and she left."

Fuller claimed only a vague recollection of the incident and none involving the phy ed teacher. She said that when she has to "talk to" staff, she always pulls them aside.

In the Public Policy Forum's study, Thurston's faculty gave Fuller "Ds" on motivating staff, positively influencing morale and meaningfully engaging both staff and parents in the school. A spaghetti dinner that drew 200 parents to Hawthorne attracted just 80 at Thurston.

But it wasn't just Fuller's autocratic style; she scored below the district average for elementary principals on every measure.

Fuller says she was "shocked" by the results. "I thought I was doing all of those things. But... being a principal... I'm not just going to do things people like."

"Every school district in America has one-third of the staff that says 'over my dead body' you'll do anything that messes up my nicely laminated 1970s lesson plan," says Daggett.

Resistance to change is part of the turf. But "you've got to convince them they need to change because if you try to mandate change, they will eat you up," he says.

It's hard to say whether it was animosity toward the principal, insufficient training or resistance to change, but some Thurston teachers did not really "buy into" DI.

Clearly, the two schools' learning teams functioned differently. While Hawthorne spends its time digesting data, sharing it with teachers and devising strategies, Thurston scheduled lunch and recess duties, according to the teachers. Even then, they only had an inkling of what the team did. "They write up two sentences about what they talked about; the rest is private," says one teacher.

"I heard a rumor that my kids didn't do very well on a test last December. We asked to see the data – again and again. But we could never get it," says the teacher.

For DI to work well, data must guide classroom teaching, identifying which lessons need to be repeated and spotting kids who need help.

Both Fuller and MPS DI specialist Doris Bisek insist that all Thurston teachers have access to testing information. In fact, Bisek says, Thurston is "off to a better start implementing DI" than Hawthorne was at the same point, and she attributes the entire difference in achievement to the fact that Hawthorne has been using DI for six years, while Thurston has used it for four.

But UW's Tarver, the state's DI guru, says a positive school culture is essential. "The appropriate teacher support and the right classroom technique aren't going to happen if your teachers and principal are pulling against each other."

Regardless of which curriculum a school uses, "you don't get good results without a serious partnership between the principal and teachers. They won't own the kids and their achievement," says Korte.

Actions speak louder than words, but what gets posted on the bulletin board in a school's entry also says a lot about what's valued. At Thurston Woods, there is sheet after sheet containing the names of students with good attendance, but no honor roll is posted.

Thurston's vision statement is also prominently displayed. It reads: "Academic excellence will be achieved through the development of high self-esteem and respect in a positive environment."

If it sounds like a throwback to the now discredited self-esteem movement, it is, and it is the opposite of what happens at Hawthorne. There, self-esteem and respect come from academic achievement.

Ironically, for all of the importance given the word respect – and it is a big deal among poor black parents that their children be respected – a significant number of Thurston teachers, and its principal, don't feel respected or willing to give respect to the other.

Teachers describe an environment of such intrigue and vindictiveness that you wonder whether some of it is paranoia. But there was remarkable consistency.

Every teacher interviewed referred to the principal's "favorites," saying, "They run the school," including the learning team and even the copy machine. Teachers must request copies 48 hours in advance; if they fail to order enough, some students won't get handouts.

The woman behind the edict, Willie Fuller, looks like a corporate executive in her white blouse and black pinstriped suit, until you see her white ankle socks and gym shoes. Unlike Bettye Washington, she's also a full-time disciplinarian, with students waiting outside her office.

Last winter, that included a small-framed black boy about Dante Hamilton's age who had pulled the chair out from under his teacher as she was sitting down, causing her to fall. The boy blamed the incident on a foot malfunction, but several teachers say he now lives in a

foster home because his grandmother couldn't handle him. They described him as a hard-core behavior problem who has been "retained at least twice."

At Hawthorne, that would have set off the alarm bells and rallied a team to intervene, but not at Thurston. In fact, at Fuller's insistence, Thurston maintains a largely segregated special-education classroom of 13 cognitively disabled and emotionally disturbed male students.

Teachers have protested that the class is unmanageable (it's twice the size the state recommends given the severity of the behavior problems, says one). They've complained, too, that it's not fair to the kids, that there's no time for planning because at least some kids are always there. The oldest students verbally abuse the youngest, set a bad example, and it's hard for anyone to learn.

Thurston, unlike Hawthorne, does have an assistant principal and an implementer, but they do not relieve this class's teacher.

In 2003, when two teachers got the district special-education director to okay splitting the class by age, Fuller nixed the plan. "She said it was too late in the school year," says Cottrell, one of the teachers involved. It was only October, but "she said, 'No, let's wait until next year.'"

By then, she'd gotten rid of Cottrell, telling him another teacher with more seniority wanted his spot. It wasn't true – she'd posted the job.

Another special-education teacher came and went, and now the class is taught by a full-time substitute teacher without a special-education license, other staffers say.

The last licensed special-ed teacher took the class to last fall's all-school orientation, but Fuller had the students sent back to their room. "It just represented the attitude at that school. They wanted nothing to do with those kids.... You don't want to make them feel they're not a part of the school," says Nancy Verhunce, a special-ed teacher who left Thurston after two months.

"Room 207 became a dumping ground for anyone in special ed, instead of looking at what was best for the child," she says.

Verhunce had come from a school where she had "the total support of the principal and staff," and she has that now at another school. "But that wasn't true at Thurston Woods," she says.

Had Dante and Hasaan been enrolled at Thurston Woods, this might have been their destiny.

Mixed Messages

"We've really worked hard on putting an emphasis on closing the achievement gap," says MPS District Superintendent William Andrekopoulos, who claimed to have never before heard that Thurston Woods was "a problem school."

After nearly three years at the helm, he's instituting a standards-based evaluation of principals. Five years ago, an internal study identified principal quality, or lack of it, as the district's number-one problem.

Now, bad principals will be reassigned and given intense coaching. Those who fail to improve will be counseled out of the profession, says Sue Apps, MPS director of Leadership Support.

Last fall, at a meeting of his school principals, Andrekopoulos read the names of the district's "high achievement, high added value" schools. He had their principals stand, and everyone applauded.

A second list circulated containing the names of 14 schools that had "closed the black/white achievement gap," and it appeared as part of a $2.5 million grant request the district sent to the National Education Association in hopes of getting funding to close the gap.

MPS does not have a history of celebrating excellence in its midst. For a long time, a culture of mediocrity prevented praising the exemplary for fear it might make the inferior feel bad. So the appearance of the lists and the congratulatory moment looked like an encouraging change.

But the district sent a mixed message. There were schools like Hawthorne that didn't make the first list. Nor could they make the second, the "closing the gap" list, because a school had to have at least 10 percent white kids so that comparisons between the white and black kids could be made. It's just as valid to compare a school's black student achievement to the district's white student average to see who's closing the gap, as we did, but that wasn't done.

The district's second list may have looked like institutionalized discrimination against MPS' 55 predominantly African-American elementary schools, but Deb Lindsey, director of MPS' Division of Research and Assessment, says it was all "a terrible mistake."

"The original list was never meant to be used the way it was," she says. "It was really just an internal document" two district employees put together to study schools closing the gap and identify best practices. "The 10 percent requirement was just a number they came up with," says Lindsey.

Principal Bettye Washington watched quietly while her own efforts went unapplauded. It may be no accident that Washington feels "more isolated" and less supported by the district than ever before.

In fact, she's preparing to call it quits and retire this year or next. "When I walk out of here, I want it so set up... everything will just keep going," she says. "The success of Hawthorne School isn't about me, it's about strong veteran teachers, a stable staff of people who really want their school to succeed. It's about people who aren't afraid to take ownership of their children."

Meanwhile, the district is preparing to send even more students and teachers Ms. Fuller's way. It has spent $2.5 million on a new addition, and next year, Thurston will expand to grade eight.

That decision had "absolutely nothing to do with academic achievement," says MPS Neighborhood School Director Acquine Jackson. It was to accommodate excess students in neighboring areas.

But a district needs a positive culture just like a school does. It needs to be open and discuss its problems with candor, then build a team to tackle them. It needs to encourage and reward good work and penalize poor performance.

What does it say about the district's culture that a school's performance wasn't even considered before sending more students and teachers to it? Andrekopoulos says it doesn't matter because "our goal is to improve the performance of all schools."

In the 1980s, Chrysler Chairman Lee Iacocca had a revolutionary idea that he could turn around a failing business by changing its culture. He hoped a more collaborative workplace would tap into the expertise not of his high-paid executives but of assembly line workers to produce cars that could compete with Japanese imports.

And indeed, Iacocca transformed not just a company but an entire industry, and it spilled over to all of American business. "We're at exactly the same juncture today in education," says MPS' Apps.

But unlike a business, where the profit motive provides urgency for implementing best practices, the staff at a failing MPS school will be paid the same as one that succeeds. In fact, Willie Fuller's pay is about to go up because she'll be running a larger school.

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