

Closing the Achievement Gap: Lessons From Illinois' Golden Spike High-Poverty High-Performing Schools

Glenn W. McGee

*Wilmette School District 39; and
Northern Illinois University
Center for Governmental Studies*

The achievement gap is the single most critical issue in American education. This study illustrates the difference in academic performance between low-income children and their peers, between minority children and their classmates, and between those schools that serve a majority of children from low-income families and those that serve a more advantaged population. Using a research framework, the author identifies and examines Golden Spike schools—Illinois schools that have a sustained record of closing the achievement gap. Quantitative and qualitative analyses reveal that the Golden Spike schools have distinct commonalities in leadership, literacy, teacher qualities, and community engagement, while characteristics such as school size, class size, and alignment with state standards make little, if any, difference in their ability to close the achievement gap. The study concludes with state and local policy recommendations that will enable high-poverty schools to make substantial progress in bridging the gap.

Not long ago, I had the opportunity to visit an elementary school in an impoverished Chicago neighborhood. Students in one fourth-grade class were reading essays that were near and dear to my heart, as I had just reached a milestone year. Here is one:

When I Turn 50

When I'm 50 I will be married and I will have two kids and I will make it a point not to be like other men I know. I will help my wife raise my kids and I will be a good Daddy. I will get myself a good job and buy my kids everything that they need. I am going to work at a store and be the manager. I am going to be very nice to people and help people who need help. I am only going to be married once. I am going to have a nice life. ("Victor R.," Grade 4)

That afternoon, I had the opportunity to visit another elementary school in a wealthy Chicago suburb. My tour guide was a 10-year-old who spoke of the same aspirations as Victor as she showed me her school. Her name was Valerie. Although they are two similar students in two elementary schools, they are separated by far more than 25 miles.

Victor's chances of realizing his dreams are slim. He is now in fifth grade, and at his elementary school only 15% of his classmates met fifth-grade reading standards on the state assessment. Just 10% of them met state mathematics standards. At his neighborhood high school, 17% of the students met state reading standards, 7% met mathematics standards, 4% met writing standards, and 3% met state science standards. In 2001, the composite ACT score of all high school juniors in Illinois was 19.4, a full 5.8 points above Victor's future high school. In fact, the graduation rate at that high school is 62%. If Victor is one of those 62% who graduate, chances are that he will not have the skills necessary to pursue further education successfully, much less manage a business. His future income will most likely be far less than he needs for the "nice life" he envisions.

At Valerie's school, 97% of the fifth-grade class met reading standards and 96% met math standards. Eleventh-grade students in Valerie's neighborhood high school—which is about three times the size of Victor's—had an average ACT score of 24.3, and 87% of the students met state standards in reading, 89% in mathematics, 84% in writing, and 89% in science. The graduation rate is 98%. By attending these schools, Valerie is well on her way to "having a nice life."

As Victor graduates from fifth grade and looks toward 50, the next 6 years of his schooling represent an almost impassable chasm, while Valerie's next 6 years are a bridge to attaining her dreams (see Table 1). That is not to say that Victor will not succeed, but he will have to have fortitude, resolve, and a healthy dose of faith and good fortune. He will certainly need better schooling and more opportunities in school than he has now. Without additional intervention from the educational system, without some sweeping changes in the functioning of his schools, and without a community support network, Victor is far more likely to end up like one of those "other men he knows."

Victor and Valerie are real children attending schools that are close together and similar in enrollment. How can these schools have such enormous disparities in achievement? How can their neighborhood high schools differ so greatly in graduation rate? What can explain the fact that, by the time the students in these two elementary schools get to fifth grade, their future education and career options are pretty much predetermined? How can 10% of 10-year-old children in one neighborhood meet mathematics standards while 96% meet them just a few miles away?

Poverty is one answer. At Victor's school, 100% of the students are from low-income families, while at Valerie's school, 100% are from middle- and upper-class families. Poverty creates quite different life experiences for these two children, as illustrated by these excerpts describing two Illinois communities:

TABLE 1
A Tale of Two Systems

<i>Measures</i>	<i>Victor's Schools</i>		<i>Valerie's Schools</i>	
	<i>J. W. Johnson Elementary</i>		<i>Monroe Elementary</i>	
Enrollment	469		478	
Grade 3 class size	15.3		21.5	
% meeting/exceeding on ISAT				
Grade 5 reading	15		97	
Grade 5 writing	12		98	
Grade 5 mathematics	10		96	
% low-income students	100		0	
	<i>Manley HS</i>		<i>Hinsdale Central HS</i>	
Enrollment	650		2321	
Graduation rate (%)	62		98	
% meeting/exceeding PSAE				
Grade 11 reading	17		87	
Grade 11 writing	4		84	
Grade 11 mathematics	7		89	
Grade 11 science	3		86	
Grade 11 social studies	6		89	
Average ACT composite	13.6		24.3	
% low-income students	99		1.3	

Note. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. PSAE = Prairie State Achievement Examination; ISAT = Illinois Standards Achievement Test.

Smokey (age 9) says his sister was raped and murdered and then dumped behind his school. Other children add more details: She was eleven years old. She was beaten with a brick until she died. The murder was committed by a man who knew their mother. (Kozol, 1992, p. 15)

School is a refuge from daily pressures of life in their neighborhoods. MD shares a cramped basement apartment with his mother ... It's across from an all night convenience store where he must walk past "gangsters and predators" to get to the ice cream section. The scene spills over to his doorstep some nights. (Quintanilla, 2002, p. 17)

The difference between Victor's and Valerie's schools begins to tell the story of the achievement gap. This gap is the difference between the learning (i.e., achievement) of poor students and their peers, between children of color and their peers, and between schools with a high percentage of low-income families and their peers. Looking at the bigger picture beyond Victor and Valerie, here are the facts and figures: On the 2001 third-grade Illinois Standards Achievement Test (ISAT), 40% of low-income students meet state reading standards, compared to 75% of their peers. That means that a full 60% of third-grade students (approximately 24,000 kids) from low-income families cannot meet state reading standards in

third grade. If they cannot read at a level with their peers, they will struggle throughout school (see Figure 1).

Reading results for Grades 5 and 8 are similar. At these grades, only 36% and 44% of the students, respectively, meet state standards, compared to 70% and 74% of their more well-to-do classmates (see Figure 1).

The gap is not limited to reading. In eighth grade, less than one in five poor children meets state mathematics standards, compared to about 60% of their peers. In fifth grade, the gap is 37% versus 74%, and at third grade, 53% versus 86% (see Figure 2).

High schools cannot make up the difference. Looking at Illinois' 2001 Prairie State Achievement Examination (PSAE), one finds large and significant differences between the percentage of low-income students meeting state standards and their peers. The differences are 32% in reading, 34% in writing, 36% in mathematics, 36% in social studies, and 38% in science. In mathematics, less than one in four low-income children meet state standards, and in science, the number drops to fewer than one in five (see Figure 3).

Given that children of color are disproportionately represented in the low-income count, the achievement gap becomes more pernicious. For example, at third grade, just one in three African American third-grade students meet state standards compared to 75% of White students (see Figure 4). Even in the earliest grades, poor African American children are not getting the education they need and deserve. Here, in the land of Lincoln, home of the great emancipator, we find Hispanic and African American children achieving at levels far below their White and Asian peers. Consider these figures (see Figures 5–7) that show the differences in percentages of stu-

2001 ISAT Reading: % Meets/Exceeds

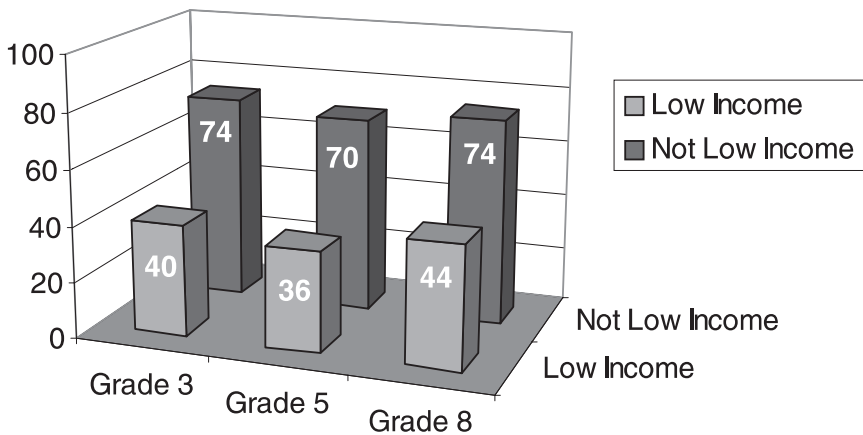


FIGURE 1 2001 Reading ISAT by income. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. ISAT = Illinois Standards Achievement Test.

dents meeting or exceeding state standards in reading, mathematics, and writing by racial and ethnic group at both the elementary and secondary grade levels.

The achievement gap is not about students who are failing, but about a system that has failed students. The difference in school performance is astounding and alarming.

2001 ISAT Mathematics: % Meets/Exceeds

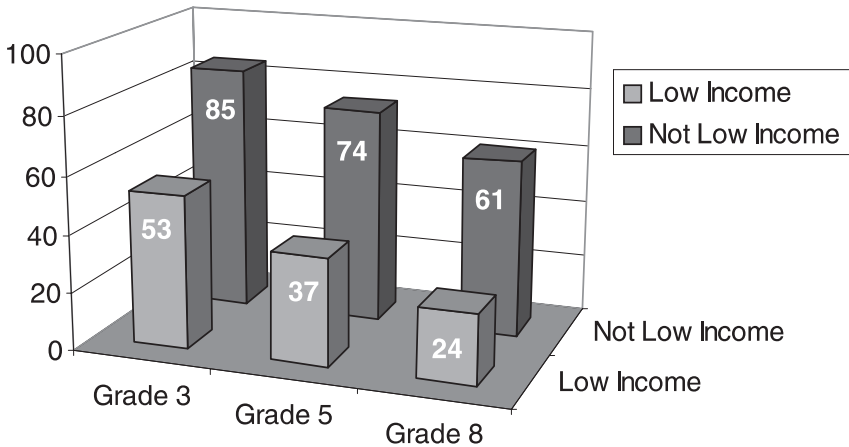


FIGURE 2 2001 Mathematics ISAT by income. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. ISAT = Illinois Standards Achievement Test.

PSAE Meets/Exceeds Performance by Low Income Status

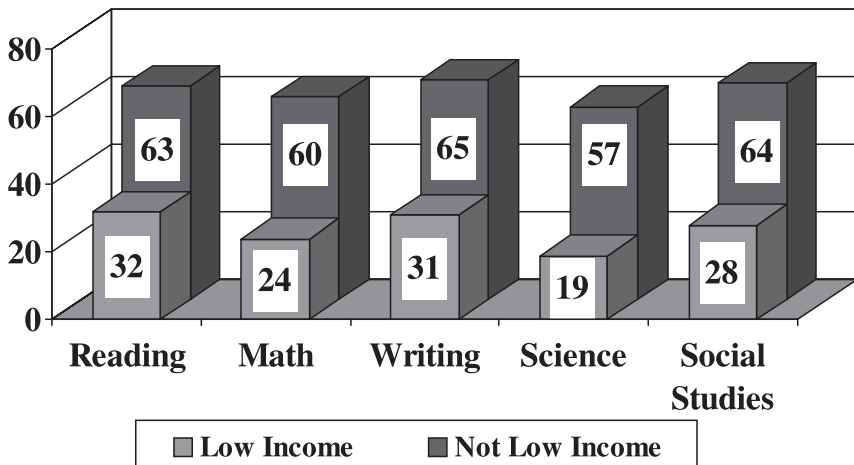


FIGURE 3 2001 PSAE by income. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. PSAE = Prairie State Achievement Examination.

2001 Grade 3 ISAT - % Meets/Exceeds

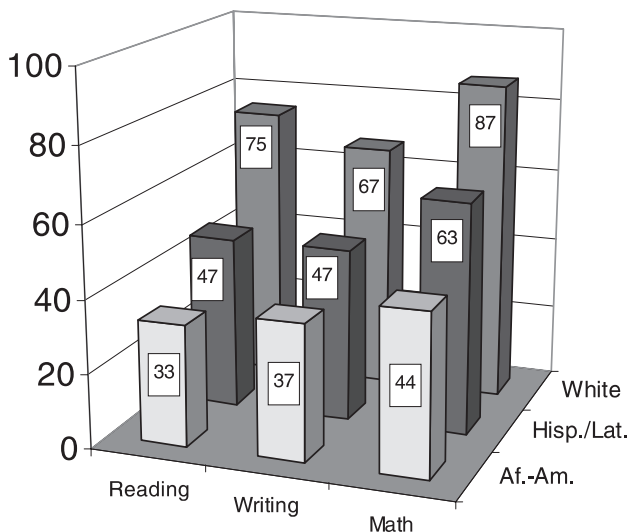


FIGURE 4 2001 Grade 3 ISAT by racial/ethnic group. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. ISAT = Illinois Standards Achievement Test; Af.-Am. = African American; Hisp./Lat. = Hispanic/Latino.

2001 Grade 5 ISAT - % Meets/Exceeds

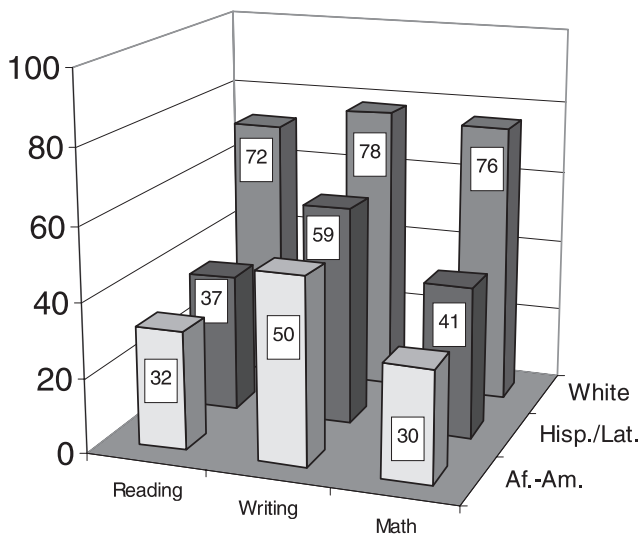


FIGURE 5 2001 Grade 5 ISAT by racial/ethnic group. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. ISAT = Illinois Standards Achievement Test; Af.-Am. = African American; Hisp./Lat. = Hispanic/Latino.

2001 Grade 8 ISAT - % Meets/Exceeds

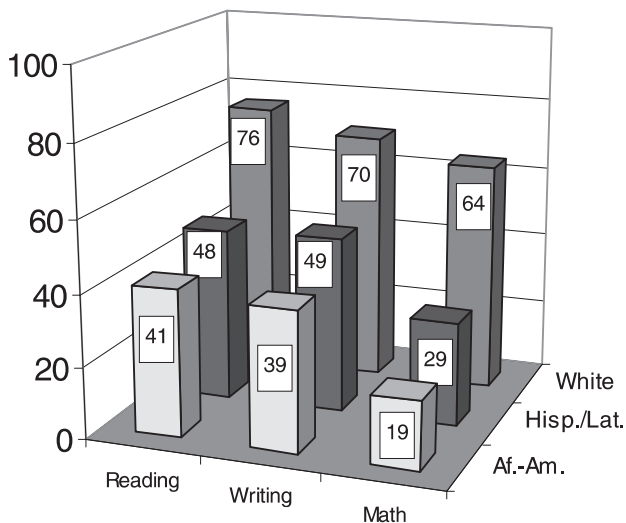


FIGURE 6 2001 Grade 8 ISAT by racial/ethnic group. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. ISAT = Illinois Standards Achievement Test; Af.-Am. = African American; Hisp./Lat. = Hispanic/Latino.

2001 Grade 11 PSAE - % Meets/Exceeds

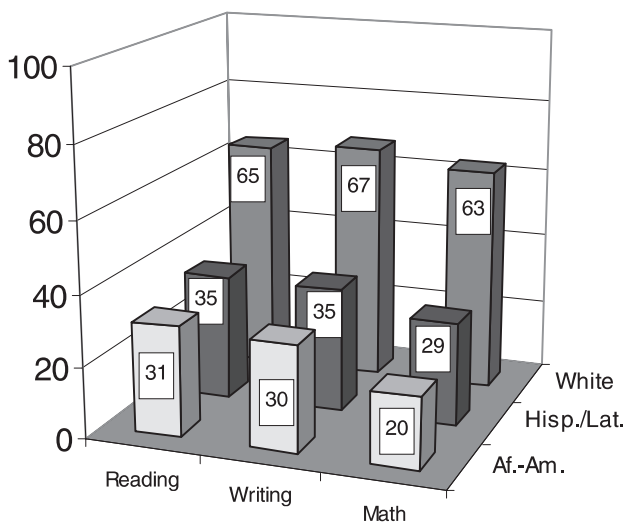


FIGURE 7 2001 Grade 11 PSAE by racial/ethnic group. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. PSAE = Prairie State Achievement Examination; Af.-Am. = African American; Hisp./Lat. = Hispanic/Latino.

At the elementary level, fewer than 33% of the 915 elementary schools with more than half of their students from low-income families have half of their students meeting third-grade reading standards, compared to almost 96% of the schools with less than half of their students from low-income families (see Figure 8).

Just 6.25% of high-poverty high schools have half of their students meeting the state high school test standards, the PSAE, compared to 73.6% of the other high schools (see Figure 9).

In Illinois, all juniors take the ACT as part of the PSAE. The data show that the average ACT score of schools with more than half of their students from low-income families was 15.3, compared to an average of 19.5 for those schools with fewer than half of their students from low-income families (see Figure 10).

For the PSAE as a whole, 20.5% of students in the high-poverty schools meet or exceed state standards, compared to almost 57% of students in schools enrolling fewer than half of their students from low-income families.

Victor and Valerie have never heard of an achievement gap, yet they are living it. Though they do not realize it, this gap matters a lot to them. It tilts the playing field precipitously, creating far different opportunities for success in school, for completing school, for succeeding in further education after high school, for leading a productive life, and for making choices. It does not affect only them, but many others. In Illinois, approximately 800,000 children are from low-income families (as defined by eligibility for federal free and reduced-price lunch). Given that about two thirds

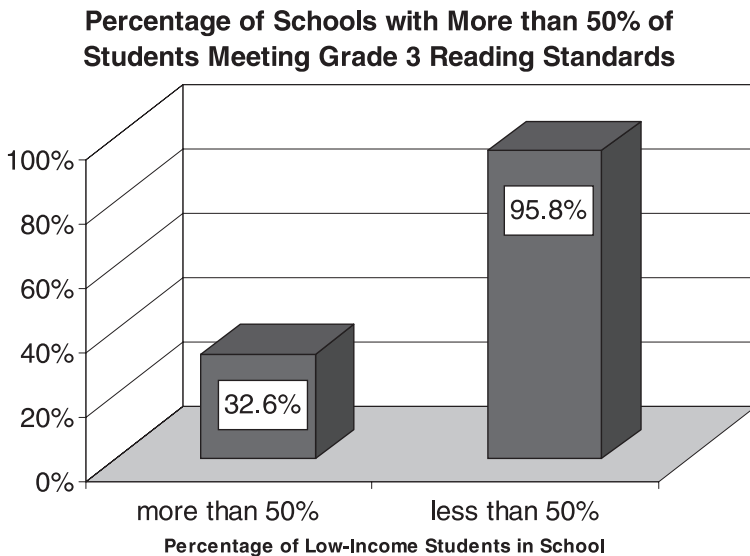


FIGURE 8 Percentage of schools with 50% meeting/exceeding Grade 3 reading ISAT by school type. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. ISAT = Illinois Standards Achievement Test.

are not meeting state standards, one can estimate that about 500,000 low-income children are at risk of not having the education they need to succeed.

Despite this bleak big picture, there are many success stories. We have ample evidence of thousands of poor, minority students who excel. They have top scores; their attendance is exemplary; they graduate from Illinois public schools and continue to excel. At the school level, there are schools with a high percentage of low-income students and high percentages of minority children who have excel-

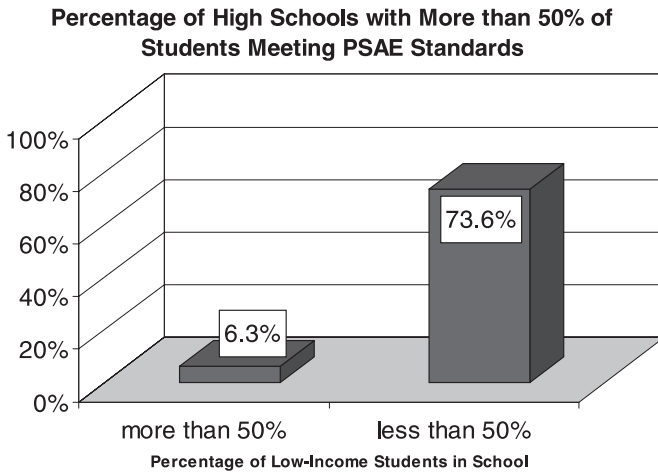


FIGURE 9 Percentage of schools with 50% meeting/exceeding PSAE by school type. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. PSAE = Prairie State Achievement Examination.

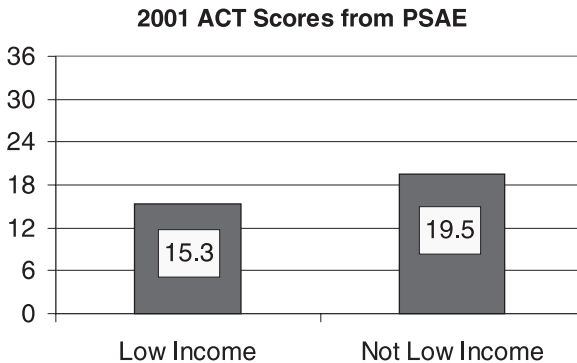


FIGURE 10 2001 ACT (PSAE test) average score by income. This figure shows the average ACT score for students in low-income high schools (low-income population > 50%) compared to other high schools. The ACT score used for this chart is the ACT that all Illinois high school juniors are required to take as part of the Prairie State Achievement Examination (PSAE) test. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>.

lent records of achievement. The large majority of their students meet or exceed state standards, parent involvement is high, and the schools improve from one year to the next. They are schools that have overcome seemingly insurmountable obstacles to ensure that each and every child will have the opportunity to succeed in school, to realize his or her dreams, and to become a productive, responsible citizen. They are schools with a story worth telling and worth replicating.

These Golden Spike schools of high poverty and high performance have inspirational and remarkable stories of extraordinary effort and unparalleled teamwork—not unlike those individuals who closed another gap with the completion of the transcontinental railroad in the 1860s. They are schools from which policymakers must learn. Policymakers must make the sweeping changes necessary to effect positive changes for poor children.

In the 1860s, President Lincoln envisioned the construction of a transcontinental railroad connecting the east and west. A knowledgeable railroad attorney and a visionary leader, Lincoln understood that the future of America depended on this link to drive commerce and migration. Lincoln also envisioned an equal and just society. He understood the power and importance of education. On one hand, the work on the railroad begun in his administration succeeded beyond what even he could have imagined, as the gap was closed 4 years after his death. On the other hand, education in his home state remains an unfulfilled promise for most poor and minority children.

Though the achievement gap is measured by test scores, it is not about just test scores. It is about opportunities and choices that some students have and others never will. The scores previously cited reflect the current state of education for Illinois' students. One can argue that state test scores may not measure abstract concepts like self-esteem, creativity, leadership, teamwork, or a variety of other attributes that contribute to success. They do, however, measure learning, and learning is inexorably intertwined with more abstract attributes. For example, Strickland (2001) noted that

those who have turned their attention to early intervention [in reading] state that it is ultimately less costly than years of remediation, less costly than retention, and less costly to students' self-esteem (Barnett, 1998). This final point may be the most compelling of all because the saving in human suffering and humiliation is incalculable. (p. 326)

This article not only illustrates the achievement gap, it also provides a glimpse of schools that have closed the gap, unlike previous studies. During the last 3 years, only 59 high-performing, high-poverty Golden Spike schools in 44 districts across the entire state have been successful in bridging the gap. This study attempts to go beyond the numbers to look at these schools that have established and sustained a record of success. Using data obtained by surveys conducted by the Illinois State Board of Education (ISBE), as well as observations and interviews described in the following, I identify commonalities and then use them to recommend policy and budget allocation decisions at the local and state level. In short, this study attempts

to answer the challenge Whitehurst (2002) posed at a White House summit: “Whatever these schools are doing to perform so well, and we need to understand that better than we do now ... there is a main effect, something going on in the school as a whole that affects the practice of all teachers in the school and raises student achievement accordingly.”

WHAT DO WE KNOW ABOUT CLOSING THE GAP

Though the achievement gap is a well-documented national phenomenon, as a local issue it is more often ignored than publicized (Pollock, 2001). Neglecting this issue is not solely the fault of the media or of educators and school boards. Jencks and Phillips (1998) claimed that little attention had been paid to the test score gap by social scientists, educational researchers, and psychologists. As a result, solutions and research on effective programs and practices are limited. Informative research does exist, however.

The North Central Regional Education Laboratory (NCREL) recently published a study of high-performing, high-poverty schools in Wisconsin (Manset et al., 2000). They found these schools had some common characteristics. Though none of the schools had all of these characteristics, all of them had more than one of the following:

1. Leadership.
 - Purposeful and proactive administrative leadership.
 - Sense of community.
 - Data-based decision making and program monitoring.
 - Student-centered programs and services designed around individual needs.
 - High expectations for all students.
2. Professional development.
 - Staff-initiated professional development.
 - Opportunities for staff interaction.
 - Peer coaching and mentoring.
3. Curriculum and instruction.
 - Emphasis on project-based instruction (teacher-directed was the norm).
 - Curriculum aligned with state standards.
 - Use of local and state assessment data.
4. Parent/community involvement.
 - Multiple means of contacting and working with parents.
 - School as community center.
5. Structure/organization.
 - Small class sizes.
 - Alternative support programs.

A significant nationwide piece of research, Haycock et al.'s (1999) *Dispelling the Myth* study involved a survey of high-poverty, high-performing high schools. They found the following characteristics were common among the schools:

1. Schools use standards extensively to design curriculum and instruction, assess student work, and evaluate teachers.
2. Instructional time for reading and mathematics is increased.
3. Schools devote a larger proportion of funds to support professional development focused on changing instructional practice.
4. Comprehensive systems are implemented to monitor individual student progress and provide extra support to students as soon as it is needed.
5. Schools focus efforts to involve parents in helping students to meet standards.
6. Schools have in place accountability systems that have real consequences for adults in the schools.

In addition, several other studies of individual schools identify commonalities of success. One of the federal Comprehensive School Reform models, Success for All (Slavin et al., 1996), identified the following:

1. Leadership.
2. Commitment of entire staff.
3. Extensive professional development.
4. Intensive early literacy support.
5. Data-driven instructional decision making and student monitoring.

The Bennet Kew School (Richardson, 2002) in California, an east Los Angeles school that regularly outperforms its affluent neighbors in Beverly Hills and Irvine, succeeds because teachers at the school

1. Analyze student data.
2. Use that data to determine areas where teachers need to improve.
3. Have time to work together to write lessons and prepare classroom assessments.
4. Use reading coaches to work “elbow to elbow” with classroom teachers, especially new teachers.

Likewise, districts that have successfully closed the achievement gap, such as Brazosport, TX, and Pinellas County, FL, claim that their success is based upon

1. Application of Baldrige principles and values.
2. Data-driven decision making.
3. High expectations.
4. Emphasis on early literacy.
5. Full involvement of staff and community.

The academic research community has also identified potential interventions that can help high-poverty, low-performing schools improve. Strickland (2001) cited specific practices including

1. Early intervention and prevention as more effective than remediation.
2. Systematic program of home support.
3. More academic learning time.
4. Careful selection of curriculum and ready access to literature.
5. Monitored individual progress.
6. Professional development for all staff working with disadvantaged children.

Elmore (2001) discussed the lack of school staff and district staff capacity for high-poverty, low-performing schools to improve. He indicated that low-performing schools' internal capacity for accountability is lacking, as are internal improvement strategies.

Grissmer, Flanagan, Kawata, and Williamson (2000) concluded that the achievement gap could effectively be addressed by targeting resources to disadvantaged families and schools, lowering class size in early grades, strengthening early childhood and early intervention programming, and improving teacher education and professional development. They also cited the need for extensive further research.

Ferguson (1998) discussed how teachers' perceptions and expectations are critical: "My bottom line conclusion is that teachers' perceptions, expectations, and behaviors probably do help to sustain, and perhaps even to expand, the black-white test score gap" (p. 313).

Rothstein (2001) posited that significant progress toward closing the achievement gap could be made if public policy focused on strengthening families and communities, attending to health and nutrition needs, and improving family housing and income. Strickland (2001) highlighted the connection between low socioeconomic status and failure in reading.

Finally, a significant body of research exists supporting early childhood education as the most effective intervention (e.g., Karoly et al., 1998; Ramey & Ramey, 1998; Thomas & Bainbridge, 2001). Jencks and Phillips (1998) noted, "If we want equal outcomes among twelfth-graders, we will also have to narrow the skill gap between black and white children before they enter school" (p. 46). This is a critical point. Much has been written about the impact of poverty on family structure, drug and alcohol use, violence, and the like, but one of the most deleterious impacts is on children's linguistic development (Whitehurst, 2001). Impoverished students are far more likely than their classmates to enter school linguistically disadvantaged, because they do not have experiences that will promote literacy and reading readiness.

Faced with such obstacles, schools represent the only hope for children to acquire early literacy skills that will in turn enable them to acquire and apply concepts and skills throughout their schooling and in all subject areas.

In summary, the research clearly points to some commonalities of what can and, in some cases does, close the achievement gap. Leadership that establishes a culture of high expectations is certainly key. An emphasis on early literacy and academic learning time both during and beyond the school day are two essential policies and practices. School-wide use of data and parental involvement also seem to be critical components. Accountability matters as well.

Though this research is helpful, understanding how these components translate to practice—that is, what they look like in action—is essential to replicating them in high-poverty, low-performing (HP/LP) schools. The first order of business is to develop testable hypotheses and see if these components and others suggested by the research actually exist in high-poverty, high-performing Golden Spike schools.

RESEARCH HYPOTHESES

Examining this existing research, I hypothesized that high-performing, high-poverty schools in Illinois would have most or all of the following characteristics in the five clusters:

1. School characteristics.
 - Small enrollment.
 - Low class sizes.
 - Low student mobility.
2. Leadership.
 - Leaders who advocated high standards and expectations.
 - Leaders who used data to drive instructional decisions.
 - Leaders who created an internal capacity for accountability.
3. Personnel.
 - Teachers who demonstrated high expectations.
 - Teachers who worked long hours.
 - Teachers who participated in professional development activities.
4. Curriculum and instruction.
 - Curriculum aligned to state standards.
 - Instructional emphasis on early literacy.
 - Academic learning time beyond the school day and school year.
5. Community engagement.
 - Extensive parental involvement.
 - Access to and use of early childhood education programs.
 - Attention the health and safety needs of students.

METHODOLOGY

The Golden Spike schools (high-poverty, high-performing) were identified in two ways. Schools with more than half of their students from low-income families formed the pool of high-poverty schools. A low-income student is defined as a student who receives free or reduced-price federal lunch. Illinois uses this measure, not the federal measure of Title I eligibility, when reporting and disaggregating student data for the purpose of reporting student achievement. In 2001, there were 919 high-poverty schools, representing about 29.6% of all elementary schools. Approximately 500,000 students, or 25% of the entire Illinois school population, are educated in these schools. Schools in this group that solely served the gifted and talented were excluded from the sample.

From this pool, the schools were selected based on 3 years of results from the annual state assessment (ISAT) data in two different ways.

The first criterion for selection was that schools had total ISAT scores averaging 66% or better for the last 3 years. Though ISBE currently uses 50% as the passing criterion, using this bar to label high-poverty schools as high-performing does a disservice to children in high-poverty schools. It sets expectations too low. Having one out of every two students meet state standards is not acceptable for most schools, regardless of the low-income population, and it should not be acceptable for high-poverty schools. Two out of three students meeting state standards is still a far cry from the 90% to 100% that the public would like to see, but it is certainly a more rigorous—and acceptable—standard than 50%. The total ISAT score, as determined by ISBE, is the percentage of all tests given at each school that meet or exceed state standards. By using all tests—reading, writing, mathematics, science, and social studies—and all grade levels, one avoids scores being skewed by one grade or one test. More importantly, however, it is a better measure of a comprehensive education at the school level than any individual test.

Forty out of the 919 high-poverty schools (4.4%) met this criterion. That is, 40 schools had two out of every three students meet or exceed state standards during the past 3 years.

The second criterion had two parts. Schools had to demonstrate an overall increase of 10% of the students meeting or exceeding standards on the combined ISAT and have at least 66% of all students meeting or exceeding standards in 2001. The rationale for this two-component criterion is that these schools have shown sustained, steady improvement, indicating that they are doing something to help poor, minority students succeed that the other schools are not. Twenty-two schools met this criterion, three of which qualified as Golden Spike schools by both criteria and were thus duplicated, leaving 19 new schools.

Applying these selection criteria resulted in a total sample size of 59 schools, or 6.5% of the high-poverty schools.

It is important to note that all of the criteria involved success during a 3-year period. It is statistically well established that scores from one year to another can vary greatly depending on the size of the population being tested (Kane, Staiger, & Geppert, 2002). In many Illinois schools, there are fewer than 30 students at a grade level. With such a small sample, one can expect some significant swings based upon characteristics of students, the particular testing environment, or even something that happened on the testing day. Comparing the scores of one group of a dozen students to another dozen the following year does not make a reliable comparison. Using multiyear data instead of single-year data greatly reduces potential identification errors due to small school testing populations, and also ensures that schools selected have a solid track record of high performance or continuous improvement. Finally, meaningful, institutionalized improvement occurs over a period of years, not just in 1 year.

Interview data was also collected from half of the schools, covering some schools in each of six regions of the state. Schools in which personnel were selected for interviews represented a distribution of size, racial distribution of the student population, and classification as urban, rural, or suburban. To validate interview data, half of these schools and districts were visited for onsite observations and interviews with teachers and principals. Published materials and Web-based district documents were reviewed, and the publicly available demographic data from the state report card was examined. The following two sections detail these findings.

QUANTITATIVE FINDINGS

Table 2 shows the difference between the Golden Spike schools and high-poverty, low-performing (HP/LP) schools—excluding those HP/LP schools in the city of Chicago. Chicago HP/LP schools were removed from the sample because in Illinois, Chicago is truly a special case, as its total enrollment of 440,000 students dwarfs even the second largest district's size of approximately 20,000. For good reason, Chicago is treated as a separate entity throughout the Illinois School Code. Table 2, then, gives a more accurate comparison of Golden Spike to HP/LP schools across the state.

Perhaps the most striking finding is that these schools are not dramatically different. Though the mean enrollment of the Golden Spike schools was 325, compared to 402 for the HP/LP schools, the difference was not significant to the .01 level ($p = .02$). Advocates for reducing school size might point out that by using $p < .05$ as the significance level, enrollment is significantly different; thus, small schools generally have students who achieve at higher rates. This is a faulty conclusion. First of all, in looking at statewide data, the correlation between enrollment and ISAT performance is about $-.22$. Statistically, the correlation is small. Practically speaking, 325 students is not a great deal less than 402. Given that most schools spanned at least six grades,

TABLE 2
Means of Demographic Variables in Golden Spike and HP/LP Schools
(Chicago Schools Excluded)

<i>Characteristic</i>	<i>HP/HP</i>	<i>HP/LP</i>	<i>P Value</i>
School level			
Enrollment	325	402	.017
Attendance rate	94.3	93.6	.024
Mobility rate	23.6	30.3	.008
Class size grade 1	19.2	20.7	.032
Class size grade 3	19.9	21.8	.003
Class size grade 8	21.0	20.7	.839
District level			
Instructional \$PP	\$3,944	\$3,875	.427
% \$OPP for instruction	50.7	47.9	.0001
Teacher experience	15.7	15.4	.445

Note. Source: Illinois State Board of Education 2001 annual report and database, available at <http://www.isbe.net>. HP/HP = high poverty, high performing schools (Golden Spike schools); HP/LP = high poverty, low performing schools; \$PP = dollars spent per pupil; % \$OPP for instruction = percentage of per pupil operating expenses spent on instruction.

this translates into about one more section of enrollment for each grade level. Having either two sections or three sections at grade level is hardly an explanation for success. Thus, school enrollment differences of 80 students should certainly not be the basis for a state or federal policy decision that drives millions (or billions) of dollars to reduce school size.

That said, the reader should note that several of the principals did cite small schools as a reason for success. Having a small school enables them to spend more time with staff and students, allows them to work with teachers to analyze data, and limits the number of distractions that take them away from their leadership role. These principals were from the smaller schools in the sample, those of 200 students or less. Again, however, school size is not the answer, for although there were 18 schools of 200 or fewer students in the HP/HP sample, there are 63 schools of fewer than 200 students in the HP/LP sample. It appears that something other than school size makes a difference. The evidence in favor of small schools is far from conclusive and certainly merits further research.

A second finding—regarding third-grade class size—is actually more of a nonfinding. A mean class size difference of two (20 to 22) is probably not big enough to change instruction, affording a teacher much more time for working with individual children or their families. Statewide, the correlation between third-grade class size and third-grade ISAT reading scores is significant but small. Third-grade class size has no causal effect when controlling for percentage of low-income students. Though the finding illustrates that third grade class size is lower in Golden Spike schools than HP/LP schools, most Golden Spike schools did not have class sizes of

15 or fewer students—the number that Mosteller (1995) contends makes a significant difference in student achievement.

A third finding—and another nonfinding—is that Golden Spike schools spend a slight but significantly higher percentage of their revenue on instruction (50.7%) than HP/LP schools (47.9%). Because ISBE collects district data and not school data, one cannot tell if the percentage spent on instruction at the school is the same, more, or less than the district level. One of the most frustrating aspects of making demographic comparisons is having to use district-level data instead of school-level data for instructional dollars per pupil and percentage of operating budget spent on instruction. Having school-level data could be very helpful in explaining why some low-income schools in larger districts such as Peoria, Springfield, and East St. Louis excel, while others do not. For example, in small districts such as Galesburg, one school is in the Golden Spike group, while another is on the state's failing schools list. One cannot draw any conclusions about what is happening with these special school cultures by relying on state-collected district-level data. It is only safe to say that the districts housing Golden Spike schools spend a higher percentage on instruction than HP/LP districts.

Moreover, given that the cost of living index across Illinois has a range of more than 50% (from approximately .80 in Pope County to 1.25 in Lake County), just reporting costs per pupil invites meaningless comparatives and renders any analysis invalid and ultimately ineffective. Using nonadjusted data to make public policy decisions about foundation level, poverty weighting, and the like on nonindexed data results is disadvantageous to both Chicago and suburban Chicago school districts, especially those with a large percentage of low-income students who receive a large portion of state aid.

In addition, because Illinois does not collect teacher data at the school level, one cannot accurately judge if and to what extent teacher experience, teacher salaries, and instructional spending impact student learning. For example, at one of the Golden Spike schools in Galesburg, there is a veteran staff that possesses an “entrepreneurial flair.” From state data, however, one cannot determine the difference in teacher experience between this school and the watch-list school.

A fourth finding concerns mobility rate, and it appears to be important. We know that after controlling for the percentage of low-income students, mobility does not correlate highly with the percentage of students meeting or exceeding standards on ISAT tests. When we look at just the high-poverty schools, however, the data in Table 2 indicate that there is a significant difference in the mobility rate between Golden Spike schools and HP/LP schools. For whatever reasons, student turnover is less frequent. What we cannot tell is whether a low mobility rate contributes to improved student achievement or higher student achievement results in a lower mobility rate. On one hand, a lower turnover rate certainly helps the schools in their endeavors to work with students from one year to the next, to develop a solid working relationship with families, and to ensure that students have a sequential curriculum. On the other

hand, families may choose to stay at these schools because they deliver a high quality of education or because the schools have a degree of personal attachment for these families that they find lacking in HP/LP schools. Relatively low mobility (the rate of 23.9 is still above the 2000 state average of 17.5) does make a difference, and further research is necessary to ascertain its impact.

The first hypothesis, that Golden Spike schools would have small enrollments and small class sizes, cannot be conclusively stated as true or false. Though enrollments and class sizes are smaller, the level of significance is borderline ($.05 > p > .01$). The issue merits additional research, but once again, one can conclude from this research that public policies that pour millions or even billions of dollars into making schools or class sizes smaller might be used far more effectively in bringing the best practices of the Golden Spike schools to scale and funding the policy recommendations discussed here.

An unanticipated finding was that the Golden Spike schools have a significantly lower mobility rate than HP/LP schools—although both are still higher than the state average. Whether stability contributes to success or success contributes to stability is a key question for further examination. Also worthy of study is whether the impact of mobility is nonlinear. As mobility increases, achievement might fall off at an accelerating rate.

An important concluding observation is that public policy that attempts to change school characteristics is not likely to produce better results. The Golden Spike schools have found a way to succeed where the HP/LP schools have not. They have not done it by drastically lowering class size, spending more money, or making smaller schools. How have they have done it? The real story unfolds with the qualitative findings.

QUALITATIVE FINDINGS

The interviews, document review, and visits yielded some clear findings about each of the hypotheses. The following characteristics were commonalities in more than 90% of the high-poverty, high-performing Golden Spike schools:

1. *Strong, visible leadership advocating high learning standards, high expectations, and a culture of success for all.* The principal creates a “can do/will do” culture built on a mission, communication, and collaboration. He or she is a role model of hard work, unwavering commitment, expertise, and resourcefulness. A leader for learning, the principal is involved in improving instructional practices—not just curriculum alignment. Active and visible, the principal is a presence in the school and local community and ensures that the accomplishments of students and the school are publicly recognized and celebrated.

2. *An emphasis on early literacy.* Each school has a defined program of early literacy that allots substantial blocks of time for reading instruction, 4-Blocks™ being the most prevalent. HP/HP schools all assist struggling readers through Reading Recovery or similar practices based on tutoring children in phonics, fluency, comprehension, and vocabulary to supplement classroom instruction. These schools allocate significant financial and human resources to ensure that all students read. Primary-grade classrooms have substantial classroom libraries, and students in all classrooms have myriad reading activities and opportunities. Many teachers are trained or are being trained in how to teach reading.

3. *Talented, hard-working teachers who believe that every child can and will learn.* The teachers expect all students to achieve high standards and are adamant that children in their classes will not fail. They spend long hours before and after school preparing for the school day, meeting with parents, and providing extra assistance to individual children. They work as teams within the school, and collaborate with other teachers across grade levels. They believe in their school's mission and actively strive to reach it.

4. *More academic learning time.* Principals work with teachers to maximize instructional time during the day. Big blocks of uninterrupted time are allocated for reading and literacy activities. In addition, schools provide ample opportunities for learning after school. Summer school for most students is a given.

5. *Extensive parental involvement.* These schools make every parent welcome. School is a safe, supportive place for them as well as their students. Staff make expectations for parents clear and communicate with them frequently. There is a strong emphasis on positive communication. Parent education is a priority in many schools. These schools provide opportunities for parents to improve their literacy skills and learn about parenting.

The following were evident in at least half of the Golden Spike schools:

1. *An internal capacity for accountability.* The School Improvement Plans are important to all staff members. These plans are based on measurable targets and drive instructional decisions. Everyone believes that they play a role in ensuring that targets are reached, and that professional development—for the entire staff—is tied to the plan.

2. *Extensive staff use of data to drive instructional decisions.* Teachers use local, state, and national assessment data to guide their teaching. They monitor student progress regularly and demonstrate flexibility in modifying the curriculum and changing their instructional practices based on the individual needs of children.

3. *Attention to health and safety needs of students.* HP/HP schools use character education, positive behavioral programs, and/or peer mediation to create an atmosphere that is safe and conducive to learning. Security precautions are evident. Although school health aides, school social workers, and school counselors

are a rare commodity, resourceful principals ensure that students have access to basic health and dental care and incorporate community services to provide counseling support. They are aggressive in providing nutritional breakfasts and lunches to all eligible children.

4. *Strong early childhood education programs.* Although some schools house preschool or even parent–infant programs, most schools do not. They do, however, work closely with child care, preschool providers, and parents of preschool students to make sure that students come to kindergarten with reading readiness skills and age-appropriate behaviors.

The following were not commonalities to any significant extent:

1. Professional development (on an individual basis).
2. A curriculum based on state standards.

To summarize, it was not one particular cluster—leadership, personnel, curriculum and instruction, or community engagement—that mattered most. What was necessary were good leaders; a capable, hard working staff; commitment to literacy in the early grades; more hours in school; and efforts to involve and engage parents. Also, high quality, team-based professional development plays an important role in these schools: Professional development is school-wide. All teachers learn together. Instead of pursuing individual professional development goals, the staff learns as a team. More often than not, professional development is linked to the school improvement plan.

POLICY RECOMMENDATIONS

Nearly 40 years after Coleman et al. (1966) described the impact of socioeconomic status on student achievement, we find ourselves with better measurement instruments and a plethora of research tools that tell us the same news: The achievement gap is real, and its impact on hundreds of thousands of lives is staggering. Hands are still wringing and heads are still shaking over the problem, initiatives have come and gone, grants have waxed and waned, and funding has ebbed and flowed. Yet the problem remains.

As many previous studies have done, this article illustrates the depth of the problem. In addition, however, it shows how a handful of individual schools serving predominantly low-income families have succeeded in helping two out of every three children master state learning standards, and how they have sustained and improved their record of success over time. Together, these schools hold immense promise as models for change to the extent that their commonalities can be replicated.

Efforts to close the achievement gap will not happen without concerted state and local leadership, significant changes in public policy, and public funding. Specifically, five policy recommendations are immediate and imperative:

1. Make the achievement of students from low-income families the top educational priority.
2. Increase funding for prevention of reading problems and early intervention for low-income children.
3. Reallocate and reform educational funding to ensure that schools educating a high number of high-poverty students have adequate and equitable resources to implement successful parent engagement and family literacy programs, and to extend academic learning time by operating beyond the normal school day and beyond the traditional school year.
4. Deliver specific team training for all staff members, for all school and district administrators, and for all Board members who work in high-poverty schools.
5. Expand school food service, community health access, and parent education at school.

These policy recommendations are based on what successful high-performing, high-poverty Golden Spike schools can teach us. As policy recommendations, they are necessary—though not sufficient—steps for closing the achievement gap, because no matter what policies are passed, what laws are enacted, and what best practices are replicated, it is the teachers and principals working with individual children and their families who ultimately make the difference. These policy recommendations will, however, support these educators in their endeavor.

Policy Recommendation One

Make the achievement of students from low-income families the top educational priority. The evidence is clear and compelling: The majority of boys and girls from low-income families are not meeting state standards in reading, writing, and mathematics at the elementary grades. The current education system is perpetuating an underclass of citizens and creating a need for expensive and extensive remedial programs in upper grades and community colleges. This underclass is primarily minority. Census data show that members of a racial or ethnic minority comprise a majority of poor children; thus, the education system in Illinois is de facto stratifying boys and girls by race.

Clearly, it is time for change. The future of children from low-income families and the future economic strength and viability of Illinois is truly in peril. For the welfare of students, for the welfare of communities that need skilled, educated workers, citizens, and future parents, and for the welfare of the state, the achieve-

ment gap must become the critical policy issue of the Governor, the General Assembly, and the education and business communities.

Strong, sustained leadership from many quarters is the answer. First and foremost, the newly elected governor needs to prepare and publish plans to close the achievement gap. He must publicly and repeatedly state the critical need to tackle this problem. He must demonstrate the cost effectiveness of addressing this issue now, through the educational system, rather than later, through the welfare and penal system. Second, the General Assembly needs to make closing the achievement gap its top legislative priority. In other words, they need to reallocate funds that promote inequities and identify new sources of funding for replicating the practices, programs, and policies of the Golden Spike schools. Third, the education agencies—the State Board of Education, Board of Higher Education, and Community College Board—need to issue a joint statement making minority achievement their first priority. Fourth, organizations and groups who are primary stakeholders in the education enterprise, such as teachers' unions, the PTA, professional associations, business groups, and the like, must align their goals with this priority.

Finally, local districts that serve predominantly low-income populations not only must—as required by federal law—report differences in achievement by racial ethnic groups and low income, but also insist that school improvement plans have specific action steps to help all students attain state standards. These districts need to use the Golden Spike schools as models of prioritizing policies, practices, and programs—including all school professional development—to close the achievement gap. Emulating best practices, however, is not a guarantee of success. Replicating successful programs and best practices will not succeed until school and district leaders, teachers, and support personnel have the highest expectations for each child. Local leaders—be they administrators, teachers, or community members—will need to strengthen the capacity for building a shared vision, collective beliefs, and an exceptional work ethic at each school.

Policy Recommendation Two

Increase funding for prevention of reading problems and early intervention for low-income children. The fact that quality early intervention programs in preschool, kindergarten, and first grade are far more cost-effective than remedial programs, special education, or grade retention is well documented in Illinois, in other states, and even in individual districts (Barnett, 1998). As Thomas and Bainbridge (2001) noted, “Enacting public policy that establishes educational programs for very young children should be the major strategy for helping children achieve at higher levels and reducing the achievement gap between children of high and low socioeconomic status” (p. 4). When building budgets, schools, districts, and states will maximize the effectiveness of scarce resources by driving more funding to programs and services that prevent reading problems than those that remediate them.

Despite the best preventive measures, intervention will be necessary in high-poverty schools. Recall that every Golden Spike school had an active early literacy program and successfully promoted reading both in and out of school. These schools have data—beyond the ISATs—to show that early intervention works for all students. 4-Blocks™, Reading Recovery, Accelerated Reader™, a parent lending library, and Book Buddies are all examples of what schools have done to make sure that students meet or exceed state standards. There is not one magic bullet program, but they all share commonalities: one-to-one or small group instruction in addition to regular classroom instruction; emphasis on phonics, fluency, comprehension, and vocabulary; and regular assessment of progress.

Prevention and intervention programs and services must be the first funded. Though perhaps a difficult political sell, state legislators and educational leaders need to be aggressive about reallocating funds to early learning prevention and intervention programs and away from programs and services that perpetuate inequities in funding or have limited impact on student achievement. In simple terms, prevention must prevail and intervention must be intense.

Policy Recommendation Three

Reallocate and reform educational funding to ensure that schools educating a high number of high-poverty students have adequate and equitable resources to implement successful parent engagement and family literacy programs, and to extend academic learning time by operating beyond the normal school day and beyond the traditional school year. It is not likely that the public would even consider supporting tax increases for funding education just to retain the status quo. It is likely, however, that the public would consider additional taxes were they guaranteed that significant improvements could be made and that they would save money in the long run.

Golden Spike schools could be the foundation for such a guarantee. These schools provide programs, practices, and services that work and are transferable. Bringing these to scale will require a significant investment. The question remains, however: Where can new money be found?

Several possible revenue sources for high-poverty, low-performing schools exist—including raising the state income tax—but a few hundred million dollars can be obtained through reallocation. For example, funding for the textbook loan grant and average daily attendance block grant programs should be redirected to summer and after school programs for high-poverty schools. Providing the same number of dollars per pupil to buy textbooks for children in wealthy suburban Kenilworth as in destitute Cairo is lousy public policy.

Unfortunately, reallocation and bond sales will not provide sufficient revenue to support the recommendations in this article, much less an extended day and extended school year. Though several revenue sources are available for tackling the problem of educating students from low-income families, an increase in the in-

come tax is the only one that provides enough predictable revenue to make a real difference. In Illinois, as little as half a percentage point increase would generate about \$1.8 billion in new revenue—more than needed for implementing the recommendations, thus leaving the balance to offset property tax increases.

To summarize, educational funding needs to be equitable and adequate. Funding reform must be tied to solving the problems of the most needy children first, by bringing the polices, practices, programs, and services of Golden Spike schools to scale. Educational reform that will improve HP/LP schools can be funded through reallocation of existing resources and a modest income tax increase. For example, the success of Golden Spike schools shows that targeting new dollars for extensive after school and summer programming works. State support is needed for the high-poverty schools, but state assistance—and state requirements—for more wealthy and higher performing school districts should be minimal. Help the struggling districts and leave the others alone is sound advice.

Policy Recommendation Four

Deliver specific team training for all staff members, for all school and district administrators, and for all Board members who work in high-poverty schools. To improve student achievement in HP/LP districts, state and local policymakers must recast professional development and fund it. Because leading and teaching in high-poverty schools requires different knowledge, skills, and attitudes than teaching in more affluent schools, teacher education and ongoing support programs must be designed to teach individuals how to succeed in challenging settings. State education departments and the teacher preparation institutions need to enlist the Golden Spike principals and teachers in designing, creating, and delivering materials, training, and ongoing support to the more than 800 HP/LP schools. This study shows that the principals and teachers in the Golden Spike schools behave differently and embrace different beliefs than modal teachers, including those in the same district. The high expectations and aspirations for each child, solid *esprit de corps*, collective work ethic, instructional expertise, frequent use of local and state assessment data, human relations skills, and missionary zeal may be innate to some extent, but more likely may be learned.

Moreover, staff should be taught as teams. Golden Spike schools work as teams—learning teams as well as teaching teams. The best baseball teams are composed of players who do not know their individual statistics, who will sacrifice their own individual at bat for a run (the group goal), and who expect to win every day. Players become leaders and hard work is emulated, not ridiculed. Aside from having a core group who can hit a 90-mph fastball, these teams are like the staff in the Golden Spike schools. Several principals mentioned that they could not have reached such heights without ongoing schoolwide training for all staff.

Policy Recommendation Five

Expand school food service, community health access, and parent education at school. Mandate insurance and stronger compliance with immunization requirements. The first four policy recommendations will have, at best, an incremental impact if children come to school undernourished and in ill health. Learning can best occur when a child is well nourished and safe. Many local districts are also aggressive in making sure that students receive breakfast and lunch. Despite these efforts, a significant number of students eligible for free lunch and free breakfast do not participate. Likewise, too many students needing basic eye and dental care, not to mention children with chronic health problems, are not getting proper care. The local emergency room cannot continue to be the community health clinic, as it is now for too many poor students. Golden Spike schools show that creative programs can work. Some have health centers in the building, others transport parents to health centers, and many have found that nutritious food is a powerful draw for after school and evening programs. To be successful, school districts that serve high-poverty neighborhoods will need support from their local, county, and state health departments to attend to these needs.

In addition to enacting the policies to ensure that the state budget allocates resources in the most effective manner and that policies and legislation accomplish desired ends, state educational leaders need to develop and implement an ongoing research agenda and use results to inform state and local policies and funding allocation decisions. This study has provided a fresh perspective, and the Golden Spike schools have provided several promising solutions to the problem, which have been incorporated into the above recommendations. There are still, however, several important research questions that remain unanswered:

1. What exactly are the knowledge, skills, disposition, and beliefs that individual teachers and principals in high-poverty schools need to have to ensure student success and how can these personnel acquire them?
2. What organizational values and beliefs do HP/LP schools need to acquire, and how can systemic, ongoing training be delivered to ensure that these are institutionalized?
3. What can be done to stabilize neighborhoods, thus reducing the student mobility rate?
4. How should parent education and family literacy be delivered to maximize student literacy?
5. What is the impact of schoolwide professional development, as opposed to individual professional development on student learning?
6. How does the district administration support the school improvement process and the leadership and staff of HP/HP schools?

7. What is the adequate cost for educating children in high-poverty schools? How does this vary by region and how does this vary by the percentage of low-income children in school?
8. What is the actual cost of educating students who are not reading at the end of third grade in special education and remedial programs, and how does this amount compare to the cost of providing appropriate prevention programs?
9. What is the cost to higher education for passing on students not prepared for the reading and mathematical rigors of college? What is the cost to employers of ill-prepared students?
10. What are the effects of improved literacy on crime rates and incarceration?
11. What is the annual cost to taxpayers to provide social services to dropouts?
12. What will be the impact on the workforce if approximately two thirds of low-income students continue to be unable to meet state standards upon graduation from high school?
13. How much, in terms of additional taxes, would the public be willing to pay to make all high-poverty schools high-performing schools by replicating policies, programs, practices, and services from Golden Spike schools?

Answering these questions will provide decision makers at all levels of the educational system, from the Governor's office to the classroom, with critically important information.

CONCLUSION

The single most critical problem facing Illinois public education and continued economic development is the persistence of a pernicious achievement gap. A group of high-poverty, high-performing Illinois schools have demonstrated that the gap can be closed and that the education of poor children can be improved. It is long past time to learn from these schools and to make the secrets of success far less secretive and far more accessible to all communities that educate poor students.

Local districts and schools that educate a large number of high-poverty students can also act on appropriate recommendations and are also encouraged to pursue their own dialogue with the Golden Spike schools as they strive to emulate their success. In the end, it will be these schools, in these districts, that make a difference. We must make their success a statewide priority and work as a team to ensure that each and every child meets or exceeds the Illinois Learning Standards.

Recalling Whitehurst's search for a main effect in Golden Spike schools, this research shows that there is not just one. Though high quality teachers, extensive parental involvement, and additional instructional time are all important to improving the achievement of students in high-poverty schools, not one of these fac-

tors alone is sufficient to have a long-term impact. Success requires a complex combination of conditions. Clearly, the quality and commitment of school leaders and teachers matter a great deal. Community involvement and extended learning opportunities are essential, as are school safety and security. Quality early childhood education, after school activities, and summer school are also important and necessary, though not sufficient in and of themselves. In short, there is no single main effect I could identify, but there is a very clear lesson in what it will take to enable HP/LP schools to become Golden Spike schools.

The Golden Spike schools teach us an important lesson in leadership, hard work, and teamwork, a lesson first learned long ago when America spanned the physical, though equally harrowing gap of uniting the east and west in the 1860s. Historian Stephen Ambrose (2000) wrote,

Next to winning the Civil War and abolishing slavery, building the first transcontinental railroad was the greatest achievement of the American People in the 19th century ... It took brains, muscles and sweat in quantities and scope never before put into a single project ... Most of all, it could not have been done without teamwork. (p. 17).

To paraphrase Ambrose, closing the achievement gap in schools across our great state will require leaders' brains, legislative and fiscal muscle, and the sweat of educators and parents in quantities and scope never before put into a single project; most of all, it cannot be done without teamwork. For Victor's sake, let's get to it!

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