

MINNESOTA'S FUTURE:
World-class Schools, World-class Jobs



EXECUTIVE SUMMARY

Given the important role education plays in securing a prosperous future for Minnesota, The Itasca Project and The Minnesota Business Partnership set out to answer two important questions: *How does Minnesota's education system compare with the best in the world; and what can we learn from them to deliver a better education to the students of Minnesota?*

In aggregate, Minnesota's students have higher achievement than students in most other states, as evidenced by high rankings in standardized tests, college entrance exams, and graduation rates. Further, Minnesota's 4th and 8th graders performed very well on the 2007 TIMSS. However, a closer look reveals several troubling statistics. First, evidence suggests that too many graduating students entering college and the workplace are not fully prepared, and aren't keeping up with their international counterparts. Second, Minnesota's achievement gaps between demographic groups are among the worst in the nation and those groups with the lowest performance are growing fastest.

Research revealed that, in many ways, Minnesota's education system matches up with the best in the world. The state has implemented rigorous standards, led the U.S. in providing educational choices to parents, and has equitably invested in education. However, to further elevate the system's performance, there are several areas that we can improve upon.

- Over the next several years, a significant portion of Minnesota's teachers are expected to retire and the state will need to attract thousands of top quality candidates to replace them. However, the value proposition of teaching is not consistently appealing to Minnesota's high performers.
- Minnesota's principals need additional tools and support to improve their focus on instructional leadership.
- Minnesota's education system will need relevant, results-oriented information to drive continuous improvement and the success of our students.

To help ensure Minnesota's students have access to a world-class K-12 education, The Itasca Project and The Minnesota Business Partnership will work to support initiatives that: improve traditional teacher preparation programs, recruit top talent to teaching, provide leadership development for principals, and ensure data is available and useful for continuous improvement.

A CALL TO ACTION: WHY IS A WORLD-CLASS EDUCATION IMPORTANT TO MINNESOTA?

It has become an article of faith: To compete in a global economy that prizes innovation and rewards higher level skills, Minnesota must have a “world class” education system.

Yet, until now, despite all the research and reports offering recommendations for improving education in Minnesota, we have not answered two fundamental questions:

- *How does Minnesota’s education system compare with the best in the world?*
- *What can we learn from them to deliver a better education to the students of Minnesota?*

As Minnesota employers of all sizes face global competition and pursue global opportunities, they have a vested interest in the answers to those questions.

Employers know firsthand that education is a bottom-line issue. Today’s students are tomorrow’s employees, customers, and business and community leaders. As a result, Minnesota employers have long made efforts to support their local schools.

But employers are also concerned about the quality of students graduating from Minnesota schools. Through organizations like the Minnesota Business Partnership and the Itasca Project, business leaders have worked for years with educators and state lawmakers to set high standards for our students and schools, measure progress and report results.

These efforts have been perceived by some at times as “attacks” on education. But the motivation for the policy work is the same as for the financial and volunteer support. A well-educated workforce is essential to Minnesota’s economic success and the high quality of life it has afforded us.

To maintain that high quality of life in the future, being among the best in the U.S. will not be good enough. For Minnesota to compete in a very mobile, global economy as the center of gravity shifts toward rapidly growing markets on the other side of the world, our education system must produce world-class students.

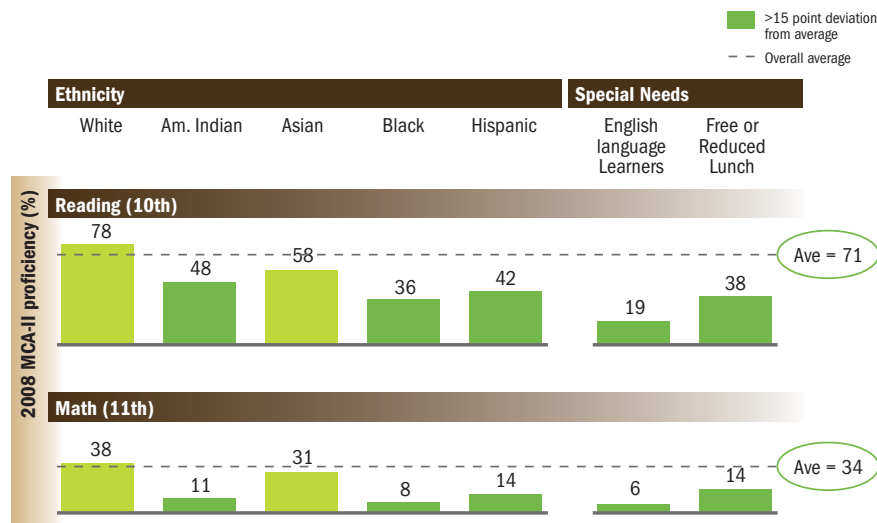
While Minnesota’s education system consists of many important stages – including early childhood, K-12 and postsecondary – the focus of this report is on primary and secondary education.

BUT ISN'T MINNESOTA'S K-12 SYSTEM STRONG?

Conventional wisdom in Minnesota suggests that our K-12 education system is doing well, even better than well, particularly compared to other US states. And, there is well-circulated evidence to support this perspective. Minnesota's graduation rate of 86% is 6th in the nation, well above the average of 75%¹ and Minnesota's ACT takers score better than those of any other stateⁱ. On the NAEP standardized national exam, Minnesota's 4th and 8th graders rank in the top ten on math and readingⁱⁱ.

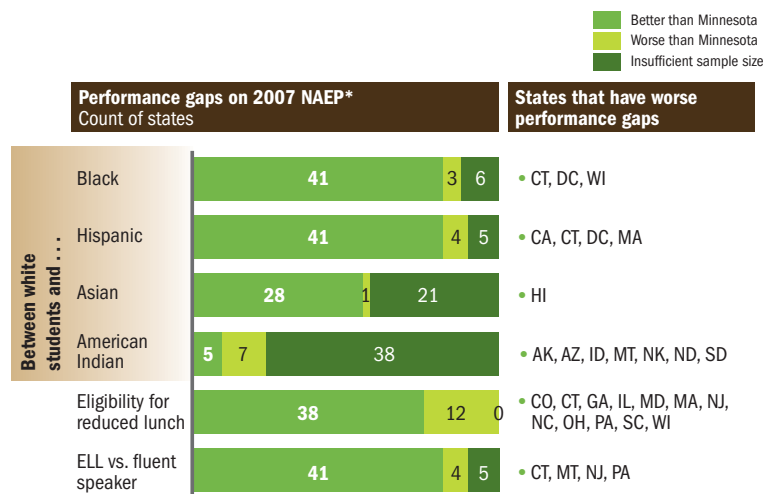
However, other statistics paint a more sobering picture. While in aggregate Minnesota may perform well relative to other states, there are significant performance gaps in the state between ethnic groups, low income students, and English language learners (figure 1). In fact, Minnesota has some of the largest performance gaps in the country (figure 2). This is particularly concerning for the workforce given the overall population is expected to decline in

Figure 1 MINNESOTA HAS SIGNIFICANT PERFORMANCE GAPS BETWEEN DEMOGRAPHIC GROUPS



Source: Minnesota Department of Education

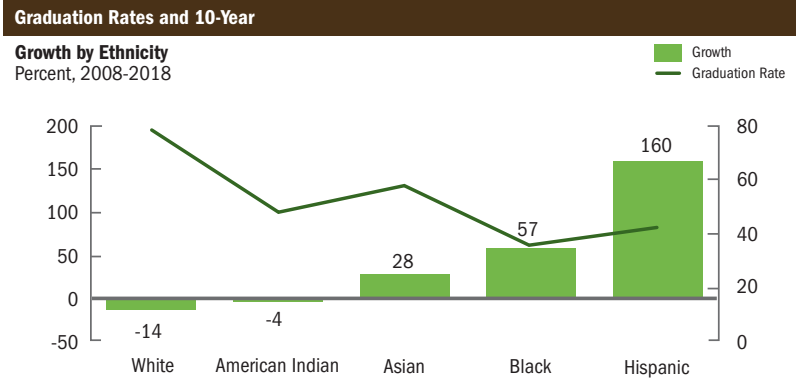
Figure 2 MINNESOTA HAS SOME OF THE LARGEST PERFORMANCE GAPS IN THE COUNTRY



* Based on fourth grade math scores; other subjects, grades show similar results
Source: National Center for Education Statistics

¹ Minnesota's 2007 graduation rate is 73% when applying the National Governor's Association formula recently agreed to by all 50 states, though comparisons to other states are not yet available.

Figure 3 DEMOGRAPHIC MIX IS SHIFTING TOWARDS MINORITY STUDENTS WHO OFTEN EXPERIENCE LOWER RATES OF ACHIEVEMENT IN CURRENT SYSTEM

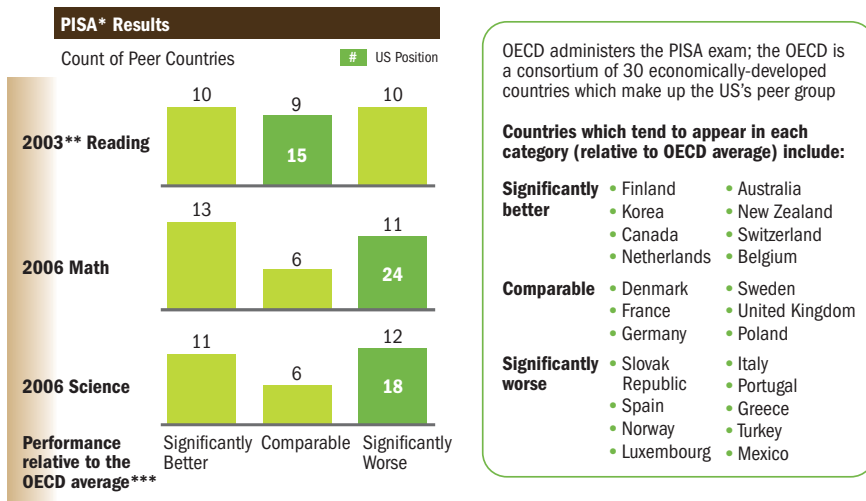


Source: "Knocking at the College Door," Western Interstate Commission for Higher Education (WICHE), March 2008

universities are insufficiently prepared – requiring remedial coursework before they are ready to learn at the college level^{iv}. And, only 22% of Minnesota businesses express satisfaction with the level of workforce preparedness apparent in high school graduates^v.

Finally, to truly understand the status of its education system in the global economy, Minnesota must compare its school system not just within the United States, but

Figure 4 THE US AVERAGE LAGS MANY INTERNATIONAL PEERS ON STUDENT SKILLS



also against the best in the world. Most comparisons between Minnesota and the other countries have been indirect. For example, results of the 2003 and 2006 PISA exam place US 15 year-olds in the middle of the pack for reading and in the bottom third for math and science (figure 4). This puts the US on par with the Slovak Republic, Turkey and Mexico and far behind global leaders such as Finland, Canada and Australia. Because Minnesota consistently

* The Program for International Student Assessment is administered to 15-year-olds
 ** The US did not participate in the 2006 reading assessment
 *** Categorization based on OECD's statistical assessment in 2006; ±5 points from average in 2003
 Source: National Center for Education Statistics, Organization for Economic Cooperation and Development

ranks above average within the United States, the assumption is that we would have performed better, but there is no way to quantify that.

The 2007 TIMSS (Trends in International Mathematics and Science Study), however, presents the first direct measurement of Minnesota students against an international backdrop in more than a decade. Results of the study reveal strong performance among Minnesota's 4th and 8th graders in science and math. Minnesota's performance in science is an extension of the success from the last time the state participated in TIMSS, in 1995. Math performance, however, represents a significant improvement over 1995. Initial analysis of the results attributes much of the improvement to implementation of statewide standards and standards-based curriculum. While the 2007 TIMSS results are encouraging, continued progress is needed to close the gap between Minnesota and international leaders.^{vi}

ASSESSMENT OF MINNESOTA'S K-12 SYSTEM: WHERE DOES CHANGE NEED TO OCCUR?

Though there are a great many elements within the education system, a scan across the world reveals that top-performing and quickly improving systems share a focus on a subset of these elements: teachers, principals, learning (i.e., standards, curriculum, assessments and interventions), information management and finances. It is on these elements that an assessment of Minnesota's performance is presented.

TEACHERS

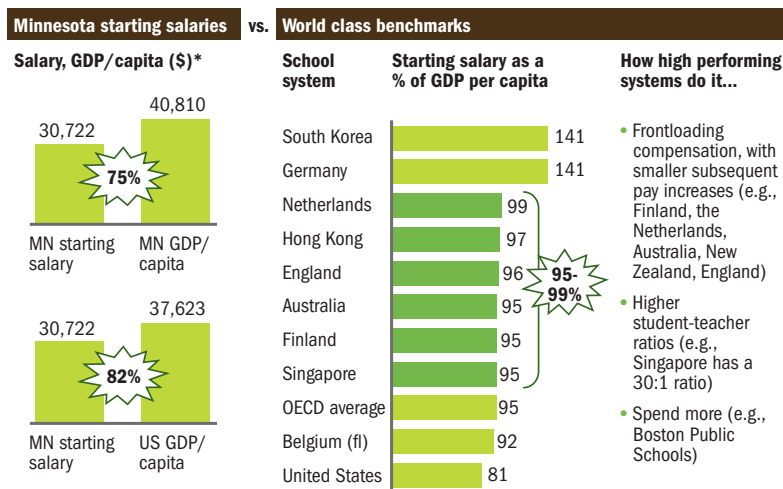
Teachers matter more to student achievement than any other element within the education system. Due to aging population trends, Minnesota will need to replace about 40% of its current teachers over the next decade or two^{vii}. Replacing a substantial portion of Minnesota's teaching corps presents challenges. The turnover, however, also means that changes made in the next few years in teacher training and recruitment could have a significant impact in a relatively short amount of time.

To elevate Minnesota's education system, the state will need to attract, develop and retain teachers that consistently match the quality seen in the world's leading

systems. For example, Finland and Singapore recruit teaching candidates from the top 10% of their graduates. Minnesota does not compile the data required to fully characterize its teacher pool. However, US data indicates that teachers generally come from the bottom third of college bound high school students^{viii}, and there is no evidence to suggest Minnesota is doing better.

Attracting a new generation of highly qualified teachers will require altering the value proposition of the profession, which is not competitive with other op-

Figure 5 THOUGH STARTING SALARIES ARE JUST ONE PART OF THE VALUE PROPOSITION, MN'S DO NOT MEET WORLD CLASS BENCHMARKS



* 2006 Data

Source: OECD, "Education at a glance" (2005); Interviews; "How the World's Best-Performing School Systems Come Out on Top" (Barber & Mourshed 2007); Education Minnesota; National Center for Education Statistics; US Department of Commerce Bureau of Economic Analysis

tions available to high-performing high school graduates. Employment prospects following graduation from a college of education can be challenging because these schools produce more teachers than are needed. On the contrary, many world-class systems screen for employment prior to entry into preparation programs to combat this very problem. Moreover, Minnesota teachers' starting salaries as a proportion of GDP are significantly below those of international leaders (figure 5). High performing systems have made various tradeoffs to enable higher pay for teachers, such as higher student-to-teacher ratios and frontloading compensation with smaller subsequent pay increases. The system in Minnesota tends to reward seniority and additional degrees rather than impact on students and often provides little in the way of highly effective and productive professional development opportunities – viable career paths, induction and mentoring. These characteristics add up to a profession that is not systematically appealing to high achievers in a 21st century workforce.

Further compounding the State's challenge in attracting high-performing candidates are the limited points of entry into education. In fact, there exists really only one viable pathway - 99% of Minnesota's teachers come through traditional preparation programs^{ix}. The workforce is increasingly mobile. People entering the workforce today will change careers about seven times in their lives, according to The Bureau of Labor Statistics. Traditional teaching programs, however, create significant barriers to entering the teaching profession for mid-career professionals or even recent college graduates who majored outside of education.

Alternative pathways such as Teach for America and those developed by The New Teacher Project², which currently have little traction in Minnesota but have demonstrated success in other states, are examples of programs that are better suited to these types of candidates and have the added benefit of targeting high-needs students. In partnership with such programs, leading cities and states are attracting meaningful quantities (10–50%) of their teachers through alternative paths.

Finally, very little is known about the effectiveness of the teacher preparation programs that currently supply nearly all of Minnesota's teachers. Neither the state nor the schools systematically report characteristics of their incoming or outgoing classes – such as high school GPA, standardized exam scores (e.g. ACT), rates of graduation and employment, or teaching effectiveness based on student outcomes. Collecting and analyzing this kind of information would enable the colleges of education to improve their own curricula based on pertinent data and allow those

² A partnership between the New Teacher Project and St. Paul Public Schools was recently established. In its first year the joint program attracted about 600 applications for 40 positions, ranging from new college graduates to mid-career professionals

interested in majoring in education to preferentially enroll in the schools that will best prepare them for a career in teaching.

PRINCIPALS

Principals' (or, more generically, school leaders') impact on student outcomes is second only to that of teachers, at least in part due to the crucial role they play in coaching teachers to better deliver instruction and ensuring overall teacher satisfaction. Minnesota's principal corps is formed by teachers self-selecting into principal candidacy. As such, the generational turnover that will impact Minnesota's teachers and the challenges encountered in bringing top talent into teaching will also impact the quality of school leadership.

Currently, the state sets a minimum floor for preparation, licensing and professional development of principals, though the impact of these criteria on student outcomes is unclear. There is no systematic approach to proactively address the leadership pipeline nor ensure that best practice tools and professional development content is delivered to all principals. Further, in many cases Minnesota's principals do not have the tools and support that allow them to focus on instructional leadership, which is correlated to student achievement. As a result, principals often spend too much time dealing with administrative tasks and not enough in the classroom, working with teachers and developing their teams.

Being a school principal is a challenging career that requires a complex set of leadership skills. A formula with demonstrated results for managers outside of the education system begins with a systematic effort to identify and groom potential leaders. Access to the ongoing mentorship and training helps develop the leadership skills demanded of front-line managers. Empowering leaders to choose their staff and holding them accountable for its results produces teams focused on commonly shared goals.

LEARNING AND INFORMATION MANAGEMENT

Working with Minnesota educators, state policymakers have established a framework of rigorous standards, curricular choices and regular assessments that are a source of strength for the state and all efforts should be made to ensure that the progress made on these dimensions is not undone.

To move forward, however, Minnesota must make better use of the results of its regular assessments to effectively drive improvements throughout the system. Until recently, Minnesota employed a relatively simplistic, two category system. Students did or did not meet state standards. And schools and districts did or did not

make “adequate yearly progress.” This system provided a clear goal for students, schools and districts but offered little insight into the real challenges facing them.

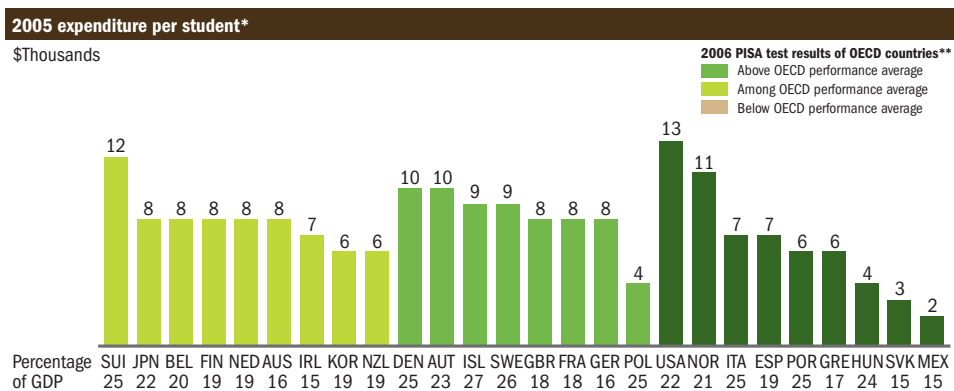
In 2008 the state began providing information about student academic growth from year-to-year, in addition to proficiency rates. This will help provide a more robust and actionable picture of how well students and their schools are performing and progressing. It is a positive step towards gathering the insights needed to provide appropriate support to schools that need it.

Partly as a result of the lack of actionable data, the state has not effectively assisted, rewarded and intervened with schools and districts. In fact, the Department of Education has only 2.5 full-time employees charged with addressing the needs of the 973 Minnesota schools that did not meet federal requirements in 2008^x. Resources and policy limit the Department to assisting with the production, but not implementation, of school improvement plans.

Not surprisingly, under this system not enough schools improve. In fact, 80% of the schools that didn’t meet federal requirements in 2004 still don’t meet them today^{xi}. World-class systems find ways to assist their struggling schools: for example, the United Kingdom has implemented a rigorous inspection and intervention process that not only drives school improvements, but has also seen the number of required interventions drop by over 50% in 10 years^{xii}.

Despite their importance to student performance, no one in Minnesota has a clear picture of the effectiveness of teachers, principals or the programs that prepare them. Student outcomes – the ultimate goal of public education – are not linked back to the major elements of the system in ways that facilitate understanding about what is and what is not working. The need for continuous improvement demands availability of and accessibility to this kind of information.

Figure 6 THE U.S. SPENDS MORE PER STUDENT THAN ANY OTHER PEER COUNTRY THOUGH ITS TEST SCORES LAG



While there is no evident correlation between spending and student achievement . . .

- A majority of top and average-performing nations spend \$8,000 or more per student
- Most lower-performing OECD countries spend less than \$8,000 per student with the exception of two outliers: Norway and the United States

* Converted to equivalent USD using purchasing power parities, based on full-time equivalents

** Of 30 total OECD countries

Source: UNESCO, Institute of Statistics; OECD PISA 2006 database

FINANCES

Often central to most discussions on education policy, the question of funding sufficiency is a key concern for many parties. However, the evidence suggests that, on average, funding of the public education system in Minnesota is sufficient, reliable and predictable. Rather, it is on the expenditure side that districts struggle with bureaucracy, compliance and delivering on underfunded mandates (e.g. special education).

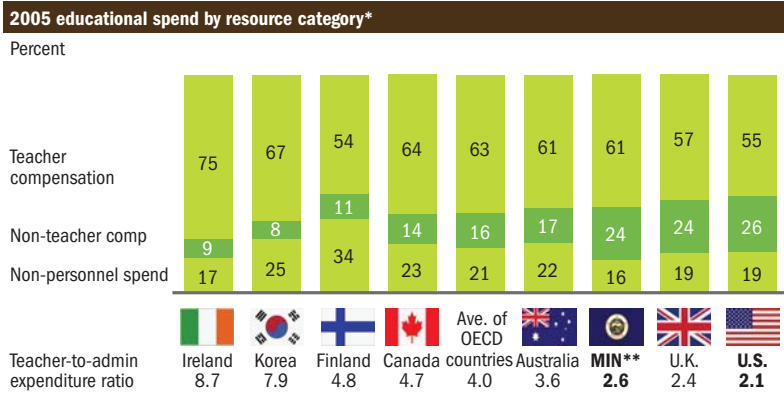
While Minnesota’s per pupil spend ranks 27th among US states, the US as a whole spends significantly more on education and delivers considerably poorer results than its international peers (figure 6). Specifically, the US spends about 50% more per pupil than most top-performing countries and is one of only two countries with above average spending and below average results.

Additionally, Minnesota allocates funding more equitably than most US states through centralized funding and a robust funding formula. However, it is possible that some of these allocations may still fall short of the true costs of educating some student populations. For instance, in 2008 almost 30% of special education outlays went underfunded, requiring cross-subsidization^{xiii}. Still, in general, funding appears to be both stable and predictable year-over-year, growing at a rate that outpaces inflation.

Despite these facts, many districts and schools across the state struggle to meet

budgetary constraints and face the challenge of understanding and ensuring efficiency of expenditures. Though little transparency exists on how the system is spending its money, it is clear that Minnesota (and the US at large) allocates a far greater portion of its resources to administration (figure 7). Additionally, heavy regulation and compliance with underfunded mandates are driving up costs and limiting instructional spending. Both the state and individual districts need more insight into how to more effectively spend the funds currently in their coffers.

Figure 7 MINNESOTA'S HIGH ADMINISTRATIVE SPEND MAY INDICATE THAT THERE ARE MORE EFFECTIVE WAYS TO DEPLOY RESOURCES



“A much lower proportion of (educational spend in the U.S.) actually reaches the class than in the best performing systems, much more of it is tied up in administration”
 – Sir Michael Barber to the Aspen Institute, 9/18/2008

* For primary, secondary, and post-secondary non-tertiary education; excluding capital expenditures
 ** 2003-04 expenditure numbers; compensation spend includes services outsourced to 3rd parties
 Source: OECD.stat, Neither Rest Nor Tranquility – Education and the American Dream in the 21st Century – Barber, 2008

STRATEGIC PRIORITIES: HOW WILL ITASCA AND THE MINNESOTA BUSINESS PARTNERSHIP MAKE A DIFFERENCE?

A plethora of reports over the last decade have generated countless ideas on how to improve the education system. Limits on both resources and mindshare demand that the business community focus its efforts in order to achieve impact of the desired magnitude. Therefore, the Minnesota Business Partnership and the Itasca Project have reviewed the findings on world-class education systems and Minnesota's performance, and jointly prioritized their efforts based on the following factors:

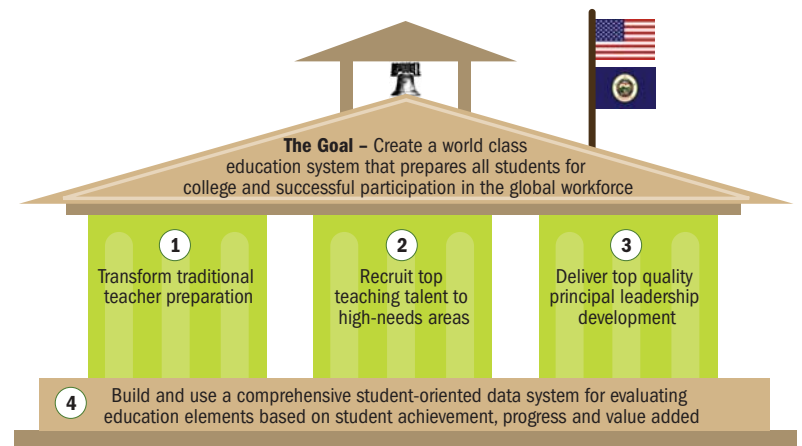
- Anticipated impact on student achievement must be significant, as gauged by scalability and sustainability
- There should be clear examples, drawn from world-class and quickly improving systems, of the actions to be taken
- Wherever possible, actions should take advantage of opportunities to build on existing momentum established by other organizations either within or outside of the system
- Success should not hinge upon legislative policy changes

As a result, four strategic priorities have emerged addressing teachers, principals and information management. Against each of these strategic priorities, Itasca and The Minnesota Business Partnership will develop a project plan and identify partners in the community to advance the following agenda (figure 8).

1. Transform traditional teacher preparation.

Set and enforce high admissions standards to ensure quality, match supply with demand and improve the value proposition of teaching; evaluate the preparation curriculum and increase emphasis on effective use of student data; introduce transparency and accountability tied to student outcomes to drive continuous improvement

Figure 8 STRATEGIC PRIORITIES FOR ITASCA AND THE MINNESOTA BUSINESS PARTNERSHIP



- 2. Recruit top teaching talent to high-needs areas.** Remove barriers that prevent high-achieving graduates and professionals who are interested in teaching but do not have an education degree from entering teaching by opening up alternative pathways, significantly increasing the number of high quality candidates from non-traditional backgrounds; focus first on meeting the needs of Minnesota's most challenged students
- 3. Deliver top quality principal leadership development.** Provide school leaders with a core instructional leadership toolkit, including the use of student data; support an ongoing set of mentoring and cohort interactions
- 4. Build and use a comprehensive student-oriented data system for evaluating education elements based on student achievement.** Collect and maintain student data from P-16; link student outcomes to teachers and teacher prep programs, districts, schools and school leaders; generate transparency into the system through readily accessible interfaces and reports

Many individuals and groups have worked tirelessly over the years in the area of education reform and changes have been notoriously slow and difficult to achieve. Itasca and the Partnership are under no illusions that this work will come easily or quickly, but the potential positive impact from improved education – as well as the dire consequences of an inadequate system – for the business community and the entire state is too much to ignore. Itasca and the Partnership are committed to playing their part in ensuring that Minnesota's children have access to a world-class education that will propel them into successful adulthood.

ABOUT THIS REPORT

Understanding the critical role that education plays in our region's prosperity, The Itasca Project and The Minnesota Business Partnership collaborated on this project to identify high impact initiatives to elevate Minnesota's K-12 education system to world-class status.

The recommendations are based on research and analysis conducted by McKinsey & Company, a global management consulting firm.

Methodology for the project included reviewing the best practices of high performing international and domestic schools and school systems. Where possible, Minnesota-specific data was analyzed and supplemented with qualitative research including in-depth interviews and consultations with parents, teachers, administrators, and policymakers across Minnesota.

This report concludes the first phase of the project, which involved fact-finding and identifying opportunities. The second phase of the project, which includes identifying partners, designing programs, advocating, and implementing the identified priorities continues.

THE INITIATIVE IS LED BY THREE CO-CHAIRS REPRESENTING THE ITASCA PROJECT AND THE MINNESOTA BUSINESS PARTNERSHIP:

Chip Emery, *retired CEO of MTS Systems*

Dick Pettingill, *CEO of Allina Hospitals and Clinics*

Tom Tiller, *retired CEO of Polaris Industries, Inc*

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Alberto Monserrate	LCN Media
Joe Nathan	University of Minnesota, Humphrey Institute
David Olson	Minnesota Chamber of Commerce
Tim Penny	Southern Minnesota Initiative Foundation
Steve Shank	Capella University
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ABOUT THE ITASCA PROJECT

The Itasca Project is an employer-led alliance drawn together by an interest in new and better ways to address regional issues that impact our future economic competitiveness and quality of life in the Twin Cities area. Its 50-plus participants are primarily private-sector CEOs; public-sector leaders including the Governor of Minnesota, the Mayors of Minneapolis and St. Paul, the Chair of the Metropolitan Council, and the President of the University of Minnesota; and the leaders of major Minneapolis/St. Paul-based foundations.

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ABOUT THE MINNESOTA BUSINESS PARTNERSHIP

The Minnesota Business Partnership is composed of 110 CEOs and senior state executives representing Minnesota's largest employers. Collectively, Partnership members employ approximately 1.9 million people worldwide, including nearly 400,000 in Minnesota. While Partnership members have national and global perspectives, the organization's focus is on Minnesota. The mission is to maintain Minnesota's high quality of life by keeping the state's economy strong and globally competitive.

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Executive Director	Charlie Weaver

- i ACT, inc. (www.act.org)
- ii National Center for Education Statistics (nces.ed.gov)
- iii Minnesota Department of Education (www.education.state.mn.gov)
- iv "Getting Prepared: A 2008 Report on Recent High School Graduates Who Took Developmental/ Remedial Courses," MNSCU and U of MN, March 2008
- v "2006 Minnesota Business Barometer Survey," MN Chamber of Commerce, 2006
- vi "Minnesota TIMSS Report: December 2008," SciMathMN (www.scimathmn.org)
- vii Minnesota Department of Education
- viii "How the World's Best-Performing School Systems Come out on Top," McKinsey & Company, 2007
- ix Minnesota Department of Education, Teacher Supply and Demand, 2007
- x Minnesota Department of Education
- xi Minnesota Department of Education
- xii Department for Education and Skills (DfES), (www.dcsf.gov.uk/research)
- xiii Minnesota Department of Education

