



Smart INVESTMENTSSM IN MINNESOTA'S STUDENTS

WHAT WE KNOW ABOUT ISSUES AND POLICY FOR CHILDREN FROM BIRTH THROUGH AGE 3

THE ISSUE

The youngest Minnesotans need quality health care, childcare and preschool to spur brain development and help launch the intellectual capabilities and social skills they'll use in their school years and beyond.

RECOMMENDED ACTIONS FOR MINNESOTA

- **Improve needs-based access to prenatal care and health care** in the early years to aid brain development.
- **Increase home visits by nurses and other skilled staff to at-risk families** for education on prenatal care, nutrition, preventative health, positive parenting approaches, cognitive development and other key areas of concern.
- **Expand public subsidies to low-income Minnesota families for high-quality childcare** as a cost-effective approach to boost early learning.

WHY IT MATTERS

- Good prenatal care and quality early childhood experiences ready a child for elementary school learning.¹ Good health and early learning establish an essential foundation from which a child launches into the elementary school years.
- Prenatal care and well-baby check-ups promote good brain formation and healthy early development. Good nutrition and health for the very young can boost language development; reduce cognition and behavior problems; decrease injuries, abuse and neglect; and improve math and reading test scores in the early elementary years.²
- Early childhood development programs yield significant benefits both for individuals and society through positive impact on literacy skills, school readiness, and proficiency with language and numbers.³ Federal Reserve Bank economists Arthur Rolnick and Rob Grunewald contend that "investing in early childhood development yields a much higher return to a region than most government-funded economic development initiatives."⁴

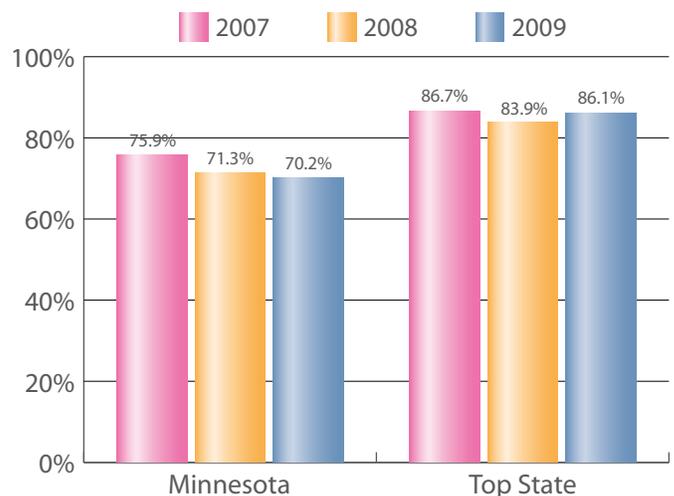
- Low-income families face financial barriers that can prevent them from enrolling young children in quality childcare and preschool programs. But children from low-income families have the most to gain from such programs because they are more at risk of starting school without the language, literacy, math and social skills that prepare them for success in learning.⁵ Programs that reach at-risk children show the greatest gains in terms of outcomes and benefits.⁶

CHALLENGES FOR MINNESOTA

- Minnesota ranked only 28th among states for the share of pregnant women – 70.2 percent – receiving the prenatal care required for healthy pregnancies and fetal development, as reported by the United Health Foundation in 2009. By contrast, Iowa ranked 7th and Wisconsin ranked 12th. Minnesota ranks only 46th for per capita dollars spent on public health (\$41), according to the United Health Foundation, but this may relate in part to Minnesota's third-best ranking for the share of population with health insurance.⁷

MINNESOTA RANKS IN THE BOTTOM HALF OF STATES FOR PRENATAL CARE

The percentage of mothers getting care is dropping



Estimates from the United Health Foundation.

- Inadequate investment from the State of Minnesota has left some 6,000 low-income families on the waiting list for state-funded childcare subsidies, undermining the access these children have to early childhood development opportunities and preschool lessons. As of early 2010, the rates paid to licensed childcare providers by the state for this program remained frozen at 2001 levels with no increases for inflation, and the governor and legislators had proposed cuts that would further reduce childcare access for low-income families.⁸
- Poverty is more common in the state among children than among residents overall, hitting almost one in eight Minnesotans under the age of 18. Poverty is significantly higher for children living in single-parent households headed by women, with almost one in three of these Minnesota families falling below the poverty threshold, compared to one in 10 of all families with children. And poverty is far more common among persons of color. Compared to the poverty rate for all white Minnesotans, rates for Minnesota's African Americans and American Indians is more than 4 times higher, the rate for Latinos is three times higher, and the rate for Asians is two times higher.⁹
- **Needs-based, high-quality childcare** from skilled, educated staff, provided in settings with low child-to-teacher ratios. Studies associate such center-based childcare with learning gains for young children.¹¹ One key principle of effective early childhood development is to have a coordinated system of early education in place at age 3, including, for some children, enrollment in preschool through programs like the Chicago Public School system's Child-Parent Centers.¹²

SMART INVESTMENTSSM IN MINNESOTA'S STUDENTS

The Growth & Justice proposal for *Smart InvestmentsSM in Minnesota's Students*, available [here](#), highlights research-based, cost-effective policies, strategies and programs for improving education from the early childhood years through to post-secondary study, with the aim, by 2020, of increasing by 50 percent the share of Minnesota students who successfully complete higher education.

Growth & Justice identified five key education stages across three critical developmental phases – Ready to Launch, Ready for Higher Learning, and Ready for Life. This issue brief focuses on the stage from birth through age 3, but unless Minnesota pays careful attention to and invests in the entire continuum, we cannot reach our goal. For issue briefs on other key *Smart Investment* stages for Minnesota's students, click [here](#).

A growing body of economic research suggests that the right investments in education can strengthen economic growth, raise the earnings power of more families and lower public costs. Educational research and economic analysis indicate that an added investment of \$1 billion a year in human capital by Minnesota would more than pay for itself.

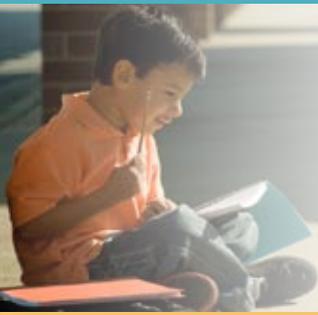
ENDNOTES

- 1 Growth & Justice, *Smart InvestmentsSM in Minnesota's Students: A Research-Based Investment Proposal*, October 2008, p. 3, citing Alexander, et al (1997); Barrington and Hendricks (1989); Ensminger and Slusarick (1992); Garnier, et al (1997). (Growth & Justice report available [here](#).)
- 2 Nurse-Family Partnership, "Evidentiary Foundations of Nurse-Family Partnership," p. 2, citing evidence from randomized, controlled evaluations of home visits for low-income, first-time mothers and their families, including findings from Olds, Robinson, O'Brien, Luckey, Pettitt, Henderson, Ng, Sheff, Korfmacher, Hiatt (2002); Olds, Henderson, Chamberlin, Tatelbaum (1986); Kitzman, Olds, Henderson, Hanks, Cole, Tatelbaum, McConnochie, Sidora, Luckey, Shaver (1997); and Olds, Kitzman, Hanks, Cole, Anson, Sidora-Arcoleo, Luckey, Henderson, Holmberg, Tutt (2007). (Available [here](#).)
- 3 Arthur J. Reynolds, "Cost-Effective Early Childhood Development Programs from Preschool to Third Grade," Growth & Justice, November 12, 2007, p. 3. (Available [here](#).)
- 4 Arthur J. Rolnick and Rob Grunewald, "Achieving a High Return on Early Childhood Investment: Evidence, Proposal, and the Minnesota Pilot," November 2007, p. 3. (Available [here](#).)
- 5 Minnesota Department of Education, *Minnesota School Readiness Study: Developmental Assessment at Kindergarten Entrance*, 2009, p. 5, 10 and 11. (Available [here](#).) The results are based on assessments conducted with a random sample equal in size to 10 percent of the total number of children entering kindergarten in fall 2008.
- 6 Rolnick and Grunewald, p. 5.
- 7 United Health Foundation, *America's Health RankingsTM 2009*. (The Minnesota overview and full access to data and rankings are available [here](#).)
- 8 "Don't Cut Early Ed Programs that Work," *Minneapolis Star Tribune*, April 13, 2010 (online April 12, 2010), section A.
- 9 Poverty data from the U.S. Census Bureau's American Community Survey, using the three-year averages for 2006 through 2008. For that time period, the Census Bureau estimates that the percentages falling below the poverty level were 9.7 percent of all Minnesotans, 12.1 percent for Minnesotans under the age of 18, 32.2 percent for female-headed households with related children but no husband present, and 10.2 percent for all families with related children. Rates for racial and ethnic groups, counting persons of all ages, were 7.3 percent for non-Hispanic whites, 32.7 percent for African Americans or blacks, 32.6 percent for American Indians and Alaska Natives, 22.3 percent for Hispanics or Latinos, and 16.2 percent for Asians.
- 10 Rolnick and Grunewald, p. 6.
- 11 Rolnick and Grunewald, p. 8.
- 12 Reynolds, p. 1 and 27.

SMART APPROACHES

For its initiative on *Smart InvestmentsSM in Minnesota's Students*, Growth & Justice assembled a stellar steering committee of experts and practitioners to review research on cost-effective approaches and programs to improve education. Smart investments address real disparities and actual student needs. The steering committee called for a significant increase in public-sector investment and private-sector engagement in the following smart approaches for children from birth through age 3.

- **Prenatal care and health care in the first years of life** to foster vital brain development and a strong start, using needs-based criteria to target the assistance for families most at risk of not receiving such care.
- **Visits to pregnant mothers and families with young children by nurses, social workers, parent educators and other well-trained staff** to promote preventative health practices, good nutrition, responsible and competent parenting, child development and learning within the family, and strong parent-child interactions. Publicly funded, needs-based home visit initiatives target at-risk families, including those with parents who are in their teens, low-income, single, high-school dropouts, coping with chemical abuse issues, or experiencing homelessness. Solid studies of nurse home visit programs have shown estimated annual returns on expenditures at 20 percent or more.¹⁰ In Minnesota, home visit efforts include the non-profit Nurse-Family Partnership, which operates in 17 counties in Greater Minnesota, and the state government's Family Home Visiting program.



Smart INVESTMENTSSM IN MINNESOTA'S STUDENTS

WHAT WE KNOW ABOUT ISSUES AND POLICY FOR CHILDREN FROM AGE 4 THROUGH 3RD GRADE

THE ISSUE

Minnesota must improve, expand and invest in early learning from preschool through 3rd grade to ensure that all children – especially Minnesotans of color and kids from low-income households – gain the skills they need to succeed.

RECOMMENDED ACTIONS FOR MINNESOTA

- **Provide effective instruction for children from age 4 through grade 3** in early reading and math skills using expanded preschool programs, small class sizes, and evidence-based approaches from successful early education initiatives.
- **Increase family services and support programs** that involve parents in their children's development and education.
- **Expand access to affordable, high quality preschool for children by age 4** through a state-funded program that can meet the need for early education, especially among at-risk kids.

WHY IT MATTERS

- Investments in education for young children lay a necessary foundation of early skills and learning that allows for more advanced skills and higher education later.¹ Such investments in early preparation increase the effectiveness of overall spending on education.² Language and literacy skills in particular stand out as important for students launching into education beyond the early years.³
- Gaps in reading and math capabilities among ethnic and racial groups appear early and are difficult to overcome as students move through their school years,⁴ making educational success from pre-kindergarten through 3rd grade vitally important to these students.
- The benefits substantially outweigh the costs of quality education and support initiatives for children from preschool through grade 3, research shows. The payoffs include a reduced need for expensive remedial instruction later, increased earnings by students in their adult years, income-related increases

in tax revenues for government, and decreased government spending on income support programs.⁵ But investments must focus on what works – for example, research into the impacts of kindergarten indicates likely poor returns from dollars spent on full-day kindergarten versus half-day programs.⁶

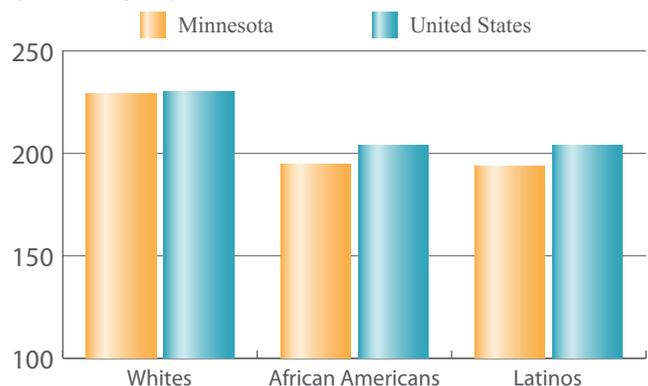
- Early childhood education has substantial and positive impacts on individual well-being and economic success. Federal Reserve Bank economists Arthur Rolnick and Rob Grunewald call such investment “the most efficient means to boost the productivity of the workforce 15 to 20 years down the road...”⁷

CHALLENGES FOR MINNESOTA

- Breakdowns show that by the end of the early education stage, Minnesota's children do no better and often worse than students nationwide when it comes to the critical gateway skill of reading. For the federal government's 2009 National Assessment of Educational Progress (NAEP), the average reading score for Minnesota's white 4th graders (230) only ties the national mark (229), while the scores for Minnesota's African American and Latino 4th graders trail the national levels – 195 compared to 204 for blacks, and 194 compared to 204 for Hispanics.⁸

MINNESOTA'S 4TH GRADERS DO NO BETTER THAN THE NATION'S IN READING

Average 2009 score for federal reading assessments in 4th grade (after the early education years)



Data from the National Assessment of Educational Progress.

GROWTH & JUSTICE

- Because Minnesota’s low-income students of color on average scored worse than their national counterparts on the 2009 4th grade NAEP test and low-income white students did not, it is unlikely the gaps in reading for Minnesotans of color trace back only to issues of poverty or low household income, as is sometimes argued.⁹
- Assessments carried out by the Minnesota Department of Education indicate that less than half of the state’s children were fully prepared for kindergarten as they entered it in fall 2008. Around 10 percent or more of our children did not yet have the needed capabilities in the areas of language and literacy, math thinking, and personal and social development. Students from low-income households were less likely to be proficient or in the process of becoming so, and boys trailed girls on many of the measures.¹⁰
- Minnesota lags well behind when it comes to twice-a-week preschool education funded by the state and federal governments. Only about 15 percent of Minnesota’s four year olds were enrolled in such programs for the 2007-08 school year compared to 38 percent for all 50 states. This tally counts a) state-funded programs, b) the federally funded Head Start program, and c) special education programs, but it misses some Minnesota 4 year olds who participate in preschool at least twice a week through school districts and other local entities using funds from the state government’s School Readiness initiative.¹¹

All and the Child-Parent Centers in Chicago’s public schools provide focused instruction, to the benefit of participating students.¹⁵

- **Parent involvement and family support initiatives** that encourage partnerships between schools and families to boost children’s academic development and social skills. Effective early education programs incorporate parental involvement¹⁶ – for example, Chicago’s Child-Parent Centers for children in pre-kindergarten through 3rd grade and the Success for All Program for elementary students.

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SMART APPROACHES

For its initiative on *Smart InvestmentsSM in Minnesota’s Students*, Growth & Justice assembled a stellar steering committee of experts and practitioners to review research on cost-effective approaches and programs to improve education. Smart investments address real disparities and actual student needs. The steering committee called for a significant increase in public-sector investment and private-sector engagement in the following smart approaches for children from age 4 through grade 3.

- **High quality, half-day, affordable preschool for more Minnesota children by age 4** via programs that follow key effectiveness principles drawn from evidence on exemplary programs nationwide. Solid research shows impressive, long-lasting benefits from high quality preschool programs, especially for children at risk.¹²
- **Small class sizes for the early education years.** Researchers have found that reduced class size in kindergarten through 2nd grade proves more cost-effective than class-size reductions for grades 3 through 6,¹³ with small-size classes over a period of several years having effects through to high school graduation.¹⁴
- **Thorough instruction in language and math skills.** Reading in particular is an essential gateway skill for success, and reading by 3rd grade prevents the need for high-cost special education and remedial instruction. Comprehensive programs like Success for

ENDNOTES

- 1 Henry M. Levin and Clive R. Belfield, “Investments in K-12 Education for Minnesota,” Growth & Justice, November 12, 2007, p. 30, citing Isaacs, “Cost-Effective Investments in Children,” 2007. (Levin and Belfield report available [here](#).)
- 2 Minnesota Department of Education, “More about School Readiness,” website, April 2010. (Available [here](#).)
- 3 Arthur J. Reynolds, “Cost-Effective Early Childhood Development Programs from Preschool to Third Grade,” Growth & Justice, November 12, 2007, p. 26. (Available [here](#).)
- 4 Growth & Justice, *Smart InvestmentsSM in Minnesota’s Students: A Research-Based Investment Proposal*, October 2008, p. 7. (Available [here](#).)
- 5 Reynolds, pp. 1, 12-15
- 6 Reynolds, p 17.
- 7 Arthur J. Rolnick and Rob Grunewald, “Achieving a High Return on Early Childhood Investment: Evidence, Proposal, and the Minnesota Pilot,” November 2007, p. 3. (Available [here](#).)
- 8 The 2009 data from the National Center for Educational Statistics for the National Assessment of Educational Progress is available [here](#). Minnesota’s reading score for white 4th graders, at 230, is not statistically different from the national score of 229. NAEP uses the categories “black” and “Hispanic.”
- 9 The 2009 NAEP data from the National Center for Educational Statistics shows the following average reading scores for fourth graders with household incomes low enough to qualify for the National School Lunch Program: whites at 215 in Minnesota and 215 nationwide, blacks at 189 in Minnesota and 200 nationwide, Hispanics at 185 in Minnesota and 200 nationwide, Asian/Pacific Islanders at 203 in Minnesota and 218 nationwide, and American Indians at 193 in Minnesota and 198 nationwide. Some of these variances in average scores for the state and nation likely fall within the range for statistical significance and therefore may be statistically equal rather than different.
- 10 Minnesota Department of Education, *Minnesota School Readiness Study: Developmental Assessment at Kindergarten Entrance*, fall 2008, p. 5, 10 and 11. (Available [here](#).) The results are based on assessments conducted with a random sample equal in size to 10 percent of the total number of children entering kindergarten.
- 11 W. Steven Barnett, et al. *The State of Preschool 2008*, National Institute for Early Education Research, April 2009, pp. 17 and 80. (Available [here](#).)
- 12 Reynolds, p. 28.
- 13 Reynolds, p. 18.
- 14 Levin and Belfield, p. 19.
- 15 Levin and Belfield, p. 19; and Reynolds, p. 24
- 16 Rolnick and Grunewald, p. 5.



Smart INVESTMENTSSM IN MINNESOTA'S STUDENTS

WHAT WE KNOW ABOUT ISSUES AND POLICY FOR STUDENTS IN GRADES 4 THROUGH 8

THE ISSUE

Minnesota's students in grades 4 through 8 need to reach grade-level proficiency with their coursework and stay on track in preparation for their next level of schooling and beyond. This need is especially acute for students of color and students from low-income families.

RECOMMENDED ACTIONS FOR MINNESOTA

- **Offer quality academic preparation** that pushes students to achieve their potential and aligns what they learn with the coursework they'll do in high school.
- **Provide support to students who need it** – tutoring that ensures their success with rigorous coursework and mentoring that better connects them to adults who can help.
- **Adopt evidence-based practices, programs and reforms** to improve the quality of education for Minnesota's students.

WHY IT MATTERS

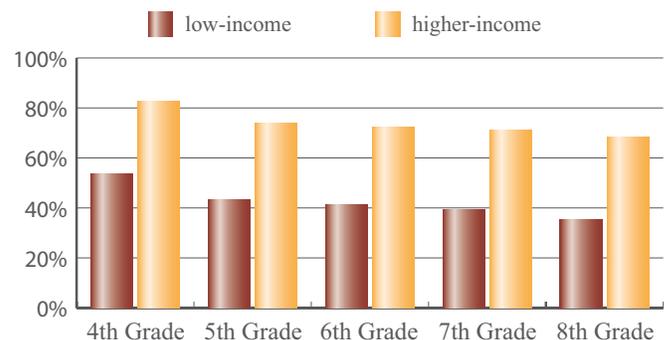
- Good reading and math skills in 4th and 8th grades improve the likelihood that students will succeed in middle school and be ready to take and pass rigorous coursework in high school.¹
- On-track educational progress boosts the chances that students will graduate from high school,² setting them up for success in higher education and for significantly higher earnings throughout their lives.³
- Academic achievement in grades 4 through 8 keeps students on course to master the skills and knowledge that are increasingly important for today's jobs⁴ and important, too, for sustaining Minnesota's economic vitality and quality of life.

CHALLENGES FOR MINNESOTA

- The results from statewide testing in 2009 show that almost one in five students in the 7th and 8th grades failed to meet Minnesota's math standards, and another one in five only partially met those standards. For Minnesota's reading standards, almost one in seven of the 7th and 8th graders failed to meet them, and almost one in five only partially met them.⁵
- Minnesota's educational system must raise the performance of all students but most especially those who lag behind because the greatest returns on investment come from addressing the greatest disparities in opportunity and achievement.⁶
- About one-third of Minnesota's public school students come from low-income families.⁷ As a group, these students are far less likely than their higher-income counterparts to show proficiency in basic math and reading skills, according to the state's standardized test results. In 2009, the share of low-income students in grades 4 through 8 that met or exceeded the math standards ranged from only about 35 to 55 percent, depending upon the grade, and the share meeting or exceeding the reading standards ranged from only about 45 to 55 percent.⁸

PERCENT OF STUDENTS WHO MET OR EXCEEDED STATE MATH STANDARDS IN 2009

Minnesota must raise all scores and address the proficiency gap for low-income students



Source: Minnesota Department of Education.

- Gaps exist, too, for proficiency in reading and math among students of color and American Indian students in grades 4 through 8, with the largest disparities among Latinos and African Americans – the state’s two largest communities of color.⁹ Already Minnesotans of color account for twice the share of the state’s student population (24 percent) than of the overall population (12 percent), and a growing percentage of Minnesota’s students will be children of color in the coming years.¹⁰
- More than 40 percent of Minnesota’s children ages 10-12 and about 15 percent of children ages 6-9 are regularly left on their own without supervised care during the school year.¹¹ Unstructured out-of-school time exacerbates the achievement gap between economically disadvantaged students and their more affluent peers.¹²

SMART APPROACHES

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- **Quality academic preparation** through good instruction, strong curriculum and meaningful assessments of student progress. Academics in grades 4 through 8 should align with what students need to succeed in high school and in their post-secondary education, with an emphasis on math and reading.
- **Intensive tutoring assistance** targeted to increase the academic success of low-performing students as they take rigorous coursework.
- **Both school-based and out-of-school support efforts** that better connect students to teachers, parents and other adults who can serve as mentors, help with school work and keep kids on track in school. Example support programs include Big Brothers and Big Sisters and the middle-school initiatives for Check & Connect and Achievement for Latinos through Academic Success (ALAS).
- **In-school programs and reforms** rooted in evidence-based research and aimed at helping students achieve, preventing problems with academic progress and intervening with students when problems occur. Examples include the Success for All program, which helps schools use structured curriculum and instructional methods to improve education for disadvantaged and at-risk students, and the AVID program for middle schools, which targets teaching and support efforts at students who are capable of completing rigorous coursework but are falling short. The new What Works Clearinghouse from the U.S. Education Department offers evidence-based [practice guides](#) for improved education.

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ENDNOTES

- 1 Growth & Justice, *Smart InvestmentsSM in Minnesota’s Students: A Research-Based Investment Proposal*, October 2008, p. 15, citing Horn & Kojaku (2001). (Growth & Justice report available [here](#).)
- 2 Growth & Justice, *Smart InvestmentsSM in Minnesota’s Students*, p. 3, citing Battin-Pearson, et al (2000) and Kaplan, Peck & Kaplan (1997).
- 3 For estimates on the earnings impacts of high school graduation and college attainment, see Henry M. Levin and Clive R. Belfield, “Investments in K-12 Education for Minnesota,” Growth & Justice, November 12, 2007, p. 1 (available [here](#)), and Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society*, The College Board, 2007, p. 10, (available [here](#)).
- 4 For more on the increased educational requirement of jobs, see Laura W. Perna, “Improving the Transition from High School to College in Minnesota: Recommendations Based on a Review of Effective Programs,” Growth & Justice, November 2007, p. 3. (Available [here](#).)
- 5 Based on 2009 scores for the Minnesota Comprehensive Assessment II and the Math Test for English Language Learners, with data provided by the Minnesota Department of Education. The tests are used to measure student progress toward the state’s academic standards. Among 7th graders for math, 17.3 failed to meet the standards, 21.7 partially met the standards, 40.8 met the standards, and 20.2 percent exceeded the standards. Among 8th graders for math, 19.4 percent failed to meet the standards, 22.3 percent partially met the standards, 37.6 met the standards, and 20.6 percent exceeded the standards. Among 7th graders for reading, 15.6 percent failed to meet the standards, 19.6 percent partially met the standards, 27.3 percent met the standards, and 37.5 exceeded the standards. Among 8th graders for reading, 14.3 percent failed to meet the standards, 18.9 percent partially met the standards, 31.0 met the standards, and 35.8 percent exceeded the standards.
- 6 Growth & Justice, *Smart InvestmentsSM in Minnesota’s Students*, p. 3.
- 7 Data from the National Center for Education Statistics for the 2007-08 school year show that 264,646 of the 833,547 Minnesotans in elementary and secondary public schools (31.7 percent) qualified for the free and reduced-price school lunches offered to children from low-income families. (For the data, click [here](#).)
- 8 2009 Minnesota Department of Education data, unpublished.
- 9 2009 Minnesota Department of Education data, unpublished.
- 10 Population shares based on data from the National Center for Education Statistics for the 2007-08 school year and from 2008 Census Bureau estimates. For an example of the projections for the student population, see the Minnesota Office of Higher Education article “Minnesota High School Graduates Will Peak in 2009,” *Insight*, April 2006 (available [here](#)).
- 11 Wilder Research, *Child Care Use in Minnesota: 2004 Statewide Household Child Care Survey*, Minnesota Department of Human Services, November 2005, p. 6. (Available [here](#).)
- 12 Growth & Justice, *Smart InvestmentsSM in Minnesota’s Students*, p. 3, citing Cooper, et al (1999) and Alexander, Entwisle & Olson (2007).

Smart INVESTMENTSSM

IN MINNESOTA'S STUDENTS

WHAT WE KNOW ABOUT ISSUES AND POLICY FOR HIGH SCHOOL STUDENTS

THE ISSUE

Minnesota must engage all students throughout their high school years, offering them the rigorous coursework and social supports that will propel them through graduation and prepare them for higher education – especially students of color and students from low-income families.

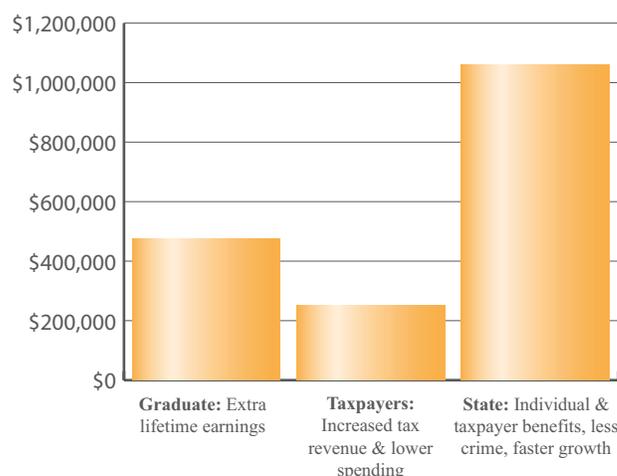
RECOMMENDED ACTIONS FOR MINNESOTA

- Offer rigorous high school coursework with sustained quality instruction and meaningful assessments to improve graduation rates and to prepare for success in higher education.
- Establish social-support initiatives both inside and outside high schools to mentor, monitor and assist students as a cost-effective way to boost achievement and graduation rates.
- Institute proven education reforms that establish small learning communities within high schools, improve the atmosphere, and better connect quality teachers to students.

WHY IT MATTERS

- The strength of Minnesota's economy depends on an educated workforce.¹ The education needed for today's jobs has increased,² making high school learning, high school graduation and post-secondary education more important to employment and productivity.
- Strong correlation exists between measures of academic achievement and high school graduation, indicating that improved mastery of school subjects reduces the likelihood that students will drop out.³
- Successful completion of high school yields significant economic benefits, with earnings for the average graduate rising by an estimated \$476,000 and the public sector gaining \$252,000 in increased tax revenue and lower expenditures over the graduate's lifetime.⁴

WIDESPREAD GAINS FOR EACH ADDITIONAL HIGH SCHOOL GRADUATE



Henry Levin & Clive Belfield, 2007, for U.S. graduates

- Minnesota high school students who take more advanced coursework and college preparatory classes do better on assessment tests and college entrance exams.⁵ And research into success with higher education indicates that students who take and pass rigorous coursework are more likely to enroll in and finish post-secondary programs.⁶

CHALLENGES FOR MINNESOTA

- Some 8,500 Minnesota students drop out of public high school each year.⁷ A higher proportion of students of color drop out, but more than half the dropouts (50.3 percent) are white.
- More than one in three (37.2 percent) of Minnesota's 11th graders failed to meet the math standards when they took the state's 2009 assessment test, and another one in five (21.8 percent) only partially met the standards. Among 11th graders from low-income families, more than three in five (62.0 percent) failed to meet the math standards, and another one in five (18.5 percent) only partially met the standards.⁸

GROWTH & JUSTICE

- Minnesota’s challenge is to boost the performance of students who lag behind. Research shows that improvements on assessment tests for students who scored below the mid-point in previous tests increase the likelihood that they will graduate from high school.⁹
- Minnesota’s low-income students and students of color are far less likely than higher-income students and white students to reach proficiency levels in math and reading on the assessment exams and more likely to drop out of high school. The dropout rates for Minnesota’s Latino and American Indian students are more than five times the rate for white students, and the African American rate is more than four times the white rate.¹⁰
- With demographic projections showing an expected decline in white students and an increase in students of color,¹¹ Minnesota’s graduation rates, achievement test scores and educational attainment levels will decline unless more Minnesotans of color succeed in school.
- **Out-of-school support for high school students**, including tutoring initiatives after school and in the summer, mentoring programs like Big Brothers/Big Sisters, and efforts to reduce teen pregnancy rates.
- **Concerted, in-school efforts to prevent students from dropping out** and to boost graduation rates using proven initiatives like Check & Connect and Achievement for Latinos through Academic Success (ALAS) to monitor student progress, offer remediation and feedback, build relationships, and link schools to families and students.

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Growth & Justice identified five key education stages across three critical developmental phases – Ready to Launch, Ready for Higher Learning, and Ready for Life. This issue brief focuses on the stage for high school grades 9 to 12, but unless Minnesota pays careful attention to and invests in the entire continuum, we cannot reach our goal. For issue briefs on other key *Smart Investment* stages for Minnesota’s students, click [here](#).

A growing body of economic research suggests that the right investments in education can strengthen economic growth, raise the earnings power of more families and lower public costs. Educational research and economic analysis indicate that an added investment of \$1 billion a year in human capital by Minnesota would more than pay for itself.

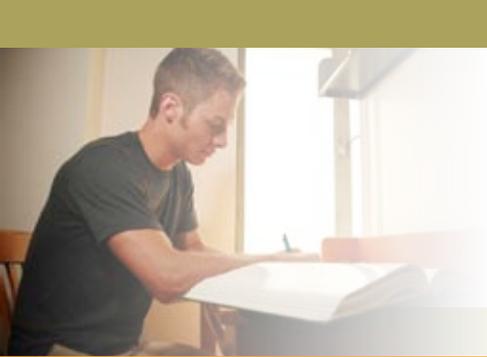
ENDNOTES

1. Tom Stinson and Tom Gillaspay, “Minnesota’s Economics & Demographics: Looking To 2030 & Beyond,” presentation slides, July 2008, p. 2.
2. Laura W. Perna, “Improving the Transition from High School to College in Minnesota: Recommendations Based on a Review of Effective Programs,” Growth & Justice, abridged, November 2007, p. 3. (Available [here](#).)
3. Henry M. Levin and Clive R. Belfield, “Investments in K-12 Education for Minnesota,” Growth & Justice, November 12, 2007, pp. 16-17. (Available [here](#).)
4. Levin and Belfield, p. 1. Calculations adjusted to reflect present value.
5. M.L. Davison, E.C. Davenport, Y-C Wu, et. al, The 2004 Minnesota Education Yearbook: The Status of Pre-K-12 Education in Minnesota, Office of Educational Accountability, College of Education and Human Development, University of Minnesota, 2004, pp. 67 and 91. (Available [here](#).)
6. Growth & Justice, *Smart InvestmentsSM in Minnesota’s Students: A Research-Based Investment Proposal*, October 2008, p. 15, citing C. Adelman (1999). (Growth & Justice report available [here](#).)
7. Estimates based on the most recent data, from the 2006-07 school year. Data are available from the federal government’s National Center for Education Statistics via http://nces.ed.gov/ccd/pub_dropouts.asp. As reported [here](#), the Education Commission of the States says that federal estimates for high school dropouts likely undercount the actual number of dropouts.
8. Based on 11th grade scores for the Minnesota Comprehensive Assessment II and the Math Test for English Language Learners, with data provided by the Minnesota Department of Education. The tests are used to measure student progress toward the state’s academic standards. “Students from low-income families” refers to those who qualify for free and reduced-price school lunches.
9. Levin and Belfield, pp. 17-18
10. National Center for Education Statistics, http://nces.ed.gov/ccd/pub_dropouts.asp. The federal data set uses the labels “Hispanic” and “Black, non-Hispanic.”
11. For an example of the projections, see the Minnesota Office of Higher Education article “Minnesota High School Graduates Will Peak in 2009,” *Insight*, April 2006. (Available [here](#).)

SMART APPROACHES

For its initiative on *Smart InvestmentsSM in Minnesota’s Students*, Growth & Justice assembled a stellar steering committee of experts and practitioners to review research on cost-effective approaches and programs to improve education. Smart investments address real disparities and actual student needs. The steering committee called for a significant increase in public-sector investment and private-sector engagement in the following smart approaches for students in grades 9 through 12.

- **Rigorous coursework matched with ongoing assessments** to ensure progress toward increased knowledge, high school graduation and opportunities for higher education.
- **Academic offerings that allow students to earn college credits while in high school** through challenging courses like the Advanced Placement Program; dual enrollment initiatives like Early College High Schools that blend high school and post-secondary study; and Minnesota’s Post-Secondary Enrollment Options program that allows high school students to take classes at public community colleges and universities.
- **High school reforms and improvement initiatives** like First Things First and Talent Development High School that establish small learning communities within the schools, increase the rigor of the courses, offer academic support when needed, and better connect teachers with students and schools with parents. The new What Works Clearinghouse from the U.S. Education Department offers evidence-based [practice guides](#) for educational improvements.



Smart INVESTMENTSSM IN MINNESOTA'S STUDENTS

WHAT WE KNOW ABOUT ISSUES AND POLICY FOR THE TRANSITION TO HIGHER EDUCATION

THE ISSUE

Although Minnesota has high rates of educational attainment, the state needs to do more to increase student access to and success with college or other higher education options, especially for students of color and students from low-income families.

RECOMMENDED ACTIONS FOR MINNESOTA

- **Improve academic preparation** for college through more rigorous coursework at the high school level, matching support services to ensure student success in tough courses, and instituting educational reforms that align curriculum from pre-school on to college.
- **Reduce financial barriers** to college access and success through increased state investments in need-based grants.
- **Increase the knowledge that students and their families have about options and financing for college and other post-secondary opportunities** by addressing Minnesota's shortage of high school counselors, providing better and more complete college-related information to students earlier in the education pipeline, and building on successful models for programs that reach and guide students.

WHY IT MATTERS

- Education has been a key contributor to Minnesota's economic success for decades.¹
- Public sector investments in education and training better the lives of Minnesotans and improve the skills, knowledge and productivity that they bring to their jobs.²
- New jobs increasingly require at least some postsecondary education, and the educational requirements have been rising for all jobs, including those that once required no more than a high school education.³

- Successful completion of higher education has a significant impact on income levels, with average lifetime earnings for individuals with a bachelor's degree, for example, estimated to be 60 percent above the earnings of individuals with only high school diplomas.⁴ Adjusted to reflect current value, the lifetime difference is estimated at \$450,000⁵ to \$280,000.⁶
- Total personal income in Minnesota would increase by about \$4 billion annually if all ethnic and racial groups had the same educational attainment levels and earnings as whites.⁷

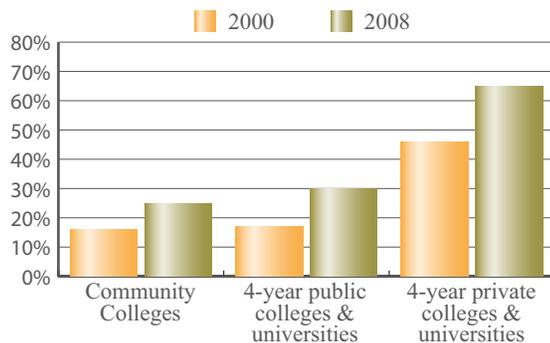
CHALLENGES FOR MINNESOTA

- With Minnesota's demographics shifting, the state must act to retain its high national standing for education attainment – Minnesota recently ranked third among states for the share of 25-34 year-olds with at least a college associate degree (48 percent).⁸
- While above national averages, Minnesota's performance on measures of college enrollment and continued study ranks below that of top performing states and states that excel on rankings for the "new economy."⁹
- For Minnesotans of color ages 18 to 24, the share enrolled in college is 9 percentage points lower than for whites, and the gap for the share graduating from four-year institutions is even larger, at 16 percentage points.¹⁰
- Demographic projections from 2005 to 2015 for Minnesota show an expected decline in white high school graduates (-17 percent) and a rise in graduates who are students of color (+40 percent), so the growth will come from the very groups least likely now to enroll in and complete higher education.¹¹

- Educational attainment lags behind in many rural Minnesota counties, especially Pine, Kanabec and Mille Lacs.¹²
- Prices for public and private colleges in Minnesota substantially exceed the national averages.¹³ Comparing 2008 to 2000 across all income groups, the average percentage of annual family income needed to pay for a year of college after financial aid has risen in Minnesota from 16 to 25 percent at community colleges, 17 to 30 percent at four-year public institutions, and from 46 to 65 percent at private four-year institutions.¹⁴

COLLEGE AFFORDABILITY HAS DECLINED IN MINNESOTA

The average percentage of annual family income needed to pay for a year of college after financial aid



National Center for Public Policy and Higher Education

- The shortage of school counselors who offer college information and guidance to high school students is striking in Minnesota, where the ratio of students to counselors is the third worst in the nation.¹⁵

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- **Increased need-based financial aid** to make higher education affordable for students with limited means.
- **Education offerings and support services that prepare high school students for college** and programs that allow them to earn college credits while in high school, through rigorous courses like the Advanced Placement Program, dual enrollment initiatives like Early College High Schools that blend high school and post-secondary study, and Minnesota's Post-Secondary Enrollment Options program that allows high school students to take classes at public community colleges and universities.

- **An improvement in the ratio of high school counselors to students** from its level near 800 to 1 to a level of 500 to 1 or better, given the role of counselors in providing information to students about college and other post-secondary options and in offering guidance on the academic requirements needed for higher education.
- **Counseling and academic preparation for college readiness** similar to what's offered through the Twin Cities-based Admission Possible program, with a focus on promising, low-income students with academic potential.

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ENDNOTES

- 1 Tom Stinson and Tom Gillaspay, "Minnesota's Economics & Demographics: Looking To 2030 & Beyond," presentation slides, July 2008, p. 2.
- 2 Matt Kane, *Smart Economic Development for Minnesota: Getting It Right in Tough Times and Beyond*, Growth & Justice, March 2009, p. 2. (Available [here](#).)
- 3 Laura W. Perna, "Improving the Transition from High School to College in Minnesota: Recommendations Based on a Review of Effective Programs," Growth & Justice, abridged, November 2007, p. 3. (Available [here](#).)
- 4 Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society*, The College Board, 2007, p. 10. (Available [here](#).)
- 5 Baum and Ma, p. 10.
- 6 Mary Pilon, "What's a Degree Really Worth," *Wall Street Journal*, posted online February 2, 2010, and citing research from Mark Schneider of the American Institutes of Research.
- 7 The National Center for Public Policy and Higher Education, *Measuring Up: The State Report Card on Education (Minnesota)*, 2008, p. 10. (Available [here](#).)
- 8 Minnesota Office of Higher Education, *Minnesota Measures: 2009 Report on Higher Education Performance*, 2009, p. 25. (Available [here](#).)
- 9 Perna, abridged, p. 6.
- 10 The National Center for Public Policy and Higher Education, pp. 6 and 9.
- 11 Projections from the Minnesota Office of Higher Education, "Minnesota High School Graduates Will Peak in 2009," *Insight*, April 2006. (Available [here](#).) Calculations by Growth & Justice.
- 12 Perna, abridged, p. 7.
- 13 Laura W. Perna, "Improving the Transition from High School to College in Minnesota: Recommendations Based on a Review of Effective Programs," Growth & Justice, unabridged, November 2007, p. 39.
- 14 The National Center for Public Policy and Higher Education, p. 7.
- 15 Perna, abridged, p. 19.