

THIRD EDITION

The Economics of Education



GEORGIA PARTNERSHIP
FOR EXCELLENCE IN EDUCATION

 **Georgia**
Chamber of Commerce
How Georgia Does Business.

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Cover Photo: Analyzing the statement and diagram of an organic compound on a computer screen.

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Fellow Georgians,

Welcome to the third edition of what has become a signature message of the Georgia Partnership: *education is economics. A vigorous, successful public education system is essential to Georgia's economic prosperity.*

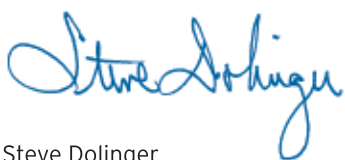
In early 2004, the Georgia Chamber of Commerce and the Georgia Partnership for Excellence in Education combined efforts for the inaugural Economics of Education publication. After two years of overwhelming response, we produced a second edition with updated data and research.

Now, in 2010, the message that *education is economics is even more critical*. Our state and nation are reeling from an economic recession that has wrought havoc on families, industries, local governments, and the public education sector. At the same time that Georgia finds itself running faster and faster to keep pace with other states and nations competing for a piece of the economic pie, we are witnessing first-hand how closely linked our education and economic systems are. Unemployment rates have soared across the board, but the impact of the economic downturn has disproportionately affected those workers lacking high school diplomas. The bottom line has never been clearer than it is now. To be a truly competitive state, to ensure prosperity for our state and its citizens, and to emerge from the recession with greater hope for our future, we must do everything we can to improve our public education system.

The purposes of this document are to build awareness of the key issues related to success in education and workforce development, and to empower individuals and businesses to get involved by identifying a variety of specific ways in which they can make an impact. The opportunity to improve the education system in Georgia is not limited to what can be done by the employees and leaders of that system. Rather, our opportunities are as diverse and numerous as the individuals and communities across the state who are willing and able to get involved.

The following pages provide an overview of key education issues and offer specific action steps to demonstrate the wide variety of ways in which business leaders and community members can get involved and make a difference in the education and future of Georgia. The last page of this booklet provides a list of key resources that are available for more information and support.

Join us in our efforts to strengthen investments in Georgia's greatest economic engine – the excellent education of our youth.



Steve Dolinger
President, Georgia Partnership for
Excellence in Education



George Israel
President & CEO, Georgia Chamber of Commerce

Making the Connection: Why High School Graduation and Work Readiness Matter

"The best economic stimulus package is a high school diploma."

- Governor Bob Wise, President, Alliance for Excellent Education, January 2010

The success of our public education system is a leading indicator of Georgia's economic and social prosperity.

One of the best ways to measure the success of a K-12 education system is to monitor the quantity and the quality of its high school graduates. Individuals who do not successfully obtain a high school diploma adversely affect the economies of our communities and our state. The direct impact of non-graduates is felt through the loss of personal income and a region's lower per capita income. Other impacts are felt indirectly: higher crime rates, higher welfare expenses, increased rates of unemployment, and greater costs of healthcare for the poor.

As shown in figure 1, the state's 2009 high school graduation rate is 78.9 percent,

which continues the trend of annual increases in this critical indicator.¹

Despite the rise in graduation rates over the past years, Georgia still lags behind other states in the percentage of high school students earning a diploma. The most recent data from the National Center for Education Statistics ranks Georgia 45th in the nation for public high school gradu-

"Approximately 50.7 percent of Georgia's high schools are dropout factories – schools in which less than 60 percent of the freshman class graduate on time."

*- Alliance for Excellent Education
Dropouts, Diplomas, and Dollars: U.S.
High Schools and the Nation's
Economy, 2008*

ation rates.² How can Georgia successfully compete in the global economy if its graduation rate is below that of 90 percent of the nation?

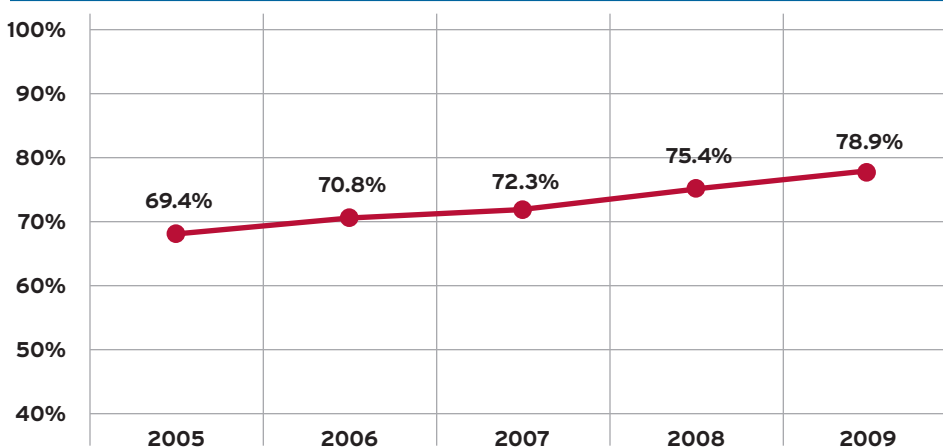
As a state, we cannot afford for our students to slip through the cracks of the K-12 education system. Our economy, our communities, and our workforce depend on the steady supply of competent, well-prepared high school graduates. We must expand our efforts to produce a student body equipped with college- and work-ready skills, especially in the vital fields of science, technology, engineering, and mathematics.

Impact of High School Non-completion on Employment and Earnings

The correlation between educational attainment and rates of unemployment is remarkable (see figure 2). The earning potential of a high school graduate exceeds that of a non-graduate, and the gains for students who pursue post-secondary education are even higher. Concurrently, the unemployment rate is much lower for individuals with higher levels of education.

A high school diploma is necessary for Georgia residents to adequately provide for themselves and their families. Students who fail to complete high school are at a higher risk of unemployment and they tend to earn less money over time than students who graduate from high school. Research has repeatedly shown that compared to high school and college grad-

Figure 1. Public High School Graduation Rates in Georgia, 2005-2009



Source: Georgia Department of Education. State Report Cards.

¹ Georgia Department of Education, 2008-2009 State Report Card. Retrieved from <http://www.doe.k12.ga.us>.

² U.S. Department of Education, National Center for Education Statistics. "Public School Graduates and Dropouts From the Common Core of Data: School Year 2006-07." Because NCES calculates graduation rates using a different formula than that of the Georgia Department of Education, they report Georgia's graduation rate in 2007 as 64.1 percent.

uates, those who have not completed high school

- Are less likely to be employed full-time;
- Will be unemployed more frequently; and
- Will experience longer periods of unemployment.³

Additionally, unemployment trends clearly indicate that the recent economic recession has impacted high school dropouts more severely than any other population, as revealed in figure 3.

The correlations between education levels and employment rates can be seen and felt clearly in local communities. In the state of Georgia, many counties with high graduation rates also tend to have lower rates of unemployment, a fact that is illustrated in the maps shown in figures 4 and 5. In February of 2010, at least 35 counties with unemployment rates above 12 percent also had graduation rates below 74 percent. If Georgia's local and state leaders hope to lessen the rate of unemployment in these communities, it is imperative that they enact policies and supports to ensure that every student graduates from high school.

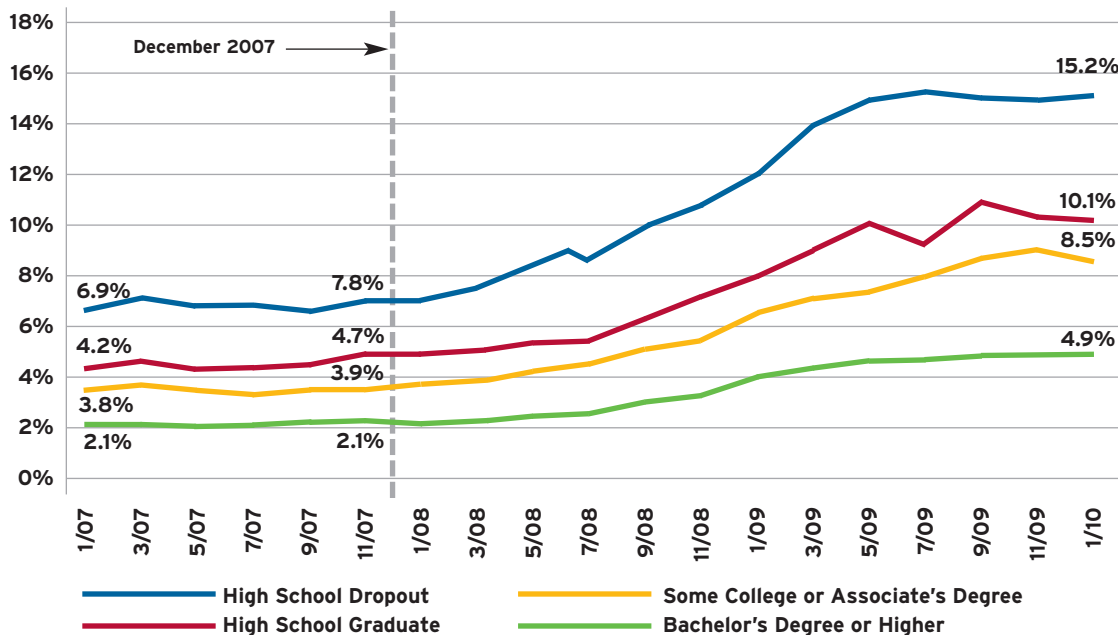
Communities that increase the educational levels of their residents become more attractive to businesses searching to locate in an area with an abundant supply of qualified workers. Additionally, as greater percentages of the population are able to secure employment, communities benefit from an increase in their tax

Figure 2. Educational Attainment and Employment in the United States, 2009

Unemployment Rate	2009 Annual Average	Median Weekly Earnings (& approx. annual)
15% 10% 5% 0%		0 400 800 1200
4.6	Bachelor's Degree & Higher	\$1,137 (\$59,124)
8.0	Some college/Associate's Degree	\$726 (\$37,752)
9.7	HS Graduates, No College	\$626 (\$32,552)
14.6	Less than a High School Diploma	\$454 (\$23,608)

Source: U.S. Bureau of Labor Statistics, 2009. Earnings and unemployment are for full-time workers age 25 and older, not seasonally adjusted.

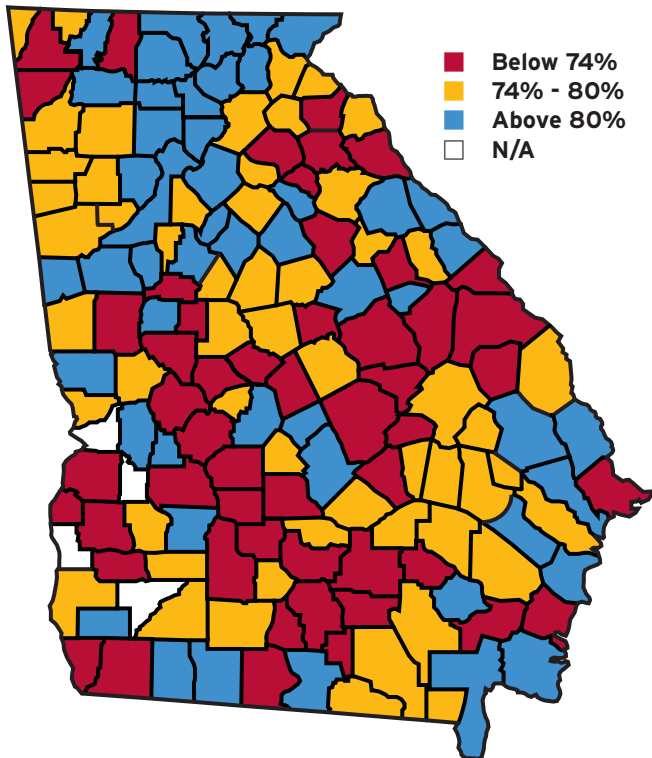
Figure 3. Unemployment Rates by Education Level, 2007-2010



Source: U.S. Bureau of Labor Statistics. Table A-4: Employment Status of the Civilian Population 25 Years and Over by Educational Attainment, February 2010.

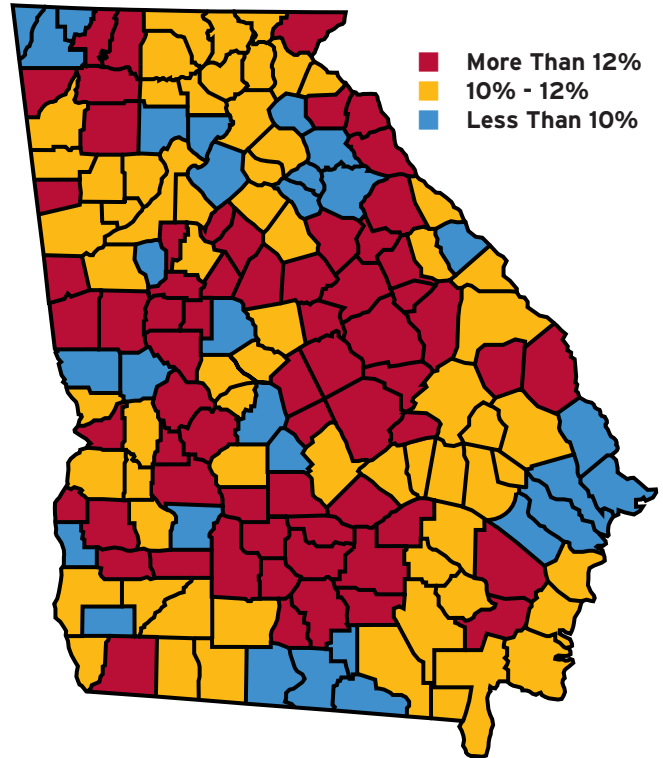
³ Levin, H., Belfield, C., Muenning, P., and Rouse, C. "The Costs and Benefits of an Excellent Education for All of America's Children." Center for Benefit-Cost Studies of Education at Teachers College, January 2007.

Figure 4. Public High School Graduation Rates by County, 2009



Source: Georgia Department of Education. Counties marked N/A either did not have a high school senior class in 2009 or did not calculate a graduation rate in 2009.

Figure 5. Unemployment Rates by County, 2010



Source: Georgia Department of Labor, February 2010. For February 2010, the average unemployment rate in the state of Georgia was 10.8% and the national average was 10.4%.

revenue. Figure 6 quantifies these potential revenue enhancements; the chart depicts the earning potential for an individual based on the level of educational attainment and the amount of taxes paid by that individual. Compared to high school dropouts, individuals who earn a high school diploma increase their income potential by roughly 35 percent and contribute nearly 44 percent more in tax payments. The benefits are substantially greater with the completion of a bachelor's degree. The additional taxes that could be secured by increasing the number of high school graduates would further support the financial health of the state and national economy.

If every Georgia student who failed to complete high school in 2009 had graduated, the estimated additional income of these students would total \$16,653,520,000.⁴ If the dropout rate in the Atlanta metropolitan area alone were cut in half, the class of 2008 would have graduated 14,000 more students. These 14,000 students would contribute

- \$110 million more spending in the economy;
- \$40 million more in investing;
- \$349 million more in home purchases by the midpoint of their careers; and
- \$14 million more on vehicle purchases each year.⁵

This additional spending and investment would potentially support 1,200 new jobs and increase the gross regional product of metropolitan Atlanta by up to \$204 million by the time these graduates reached the midpoint of their careers.⁶ Imagine the impact that this would have made on local businesses that rely on discretionary spending, as well as the housing and automobile industry, during the recent economic recession if these results were multiplied throughout the state of Georgia.

Impact of High School Non-completion on the Community

The social and economic viability of a community strongly correlates with the number of high school graduates it produces. Failure to graduate from high

4 Alliance for Excellent Education. "The High Cost of High School Dropouts: What the Nation Pays for Inadequate High Schools." August 2009. Retrieved from <http://www.all4ed.org/files/HighCost.pdf>.

5 Alliance for Excellent Education. "The Economic Benefits From Halving Atlanta's Dropout Rate: A Boom to Regional Businesses." January 2010. Retrieved from <http://www.all4ed.org/files/Atlanta.pdf>. The data in this report refer to the city of Atlanta and its 28 surrounding counties.

6 Ibid.

school has both private and public consequences: individuals' personal incomes are lower, which results in lower tax collections to finance public services.⁷ As the number of high school non-graduates rises, communities bear the costs of reduced revenue to local businesses, increased costs to support unemployed and underemployed citizens, increased costs of health care for the poor, and the need to import college and technical school graduates to fill the needs of the local workforce. Figure 7 reveals the alarming ways in which high school non-completers create economic hardships for the community as a whole. Additionally, recent economic research has quantified the financial burden of high school non-completers on the public economy. According to a detailed cost-benefit analysis of efforts aimed at improving graduation rates, the lifetime public benefits of higher tax revenues coupled with lower government spending on health, crime, and welfare are substantial. For every additional student that graduates high school, the average economic benefit to the public sector is \$209,100⁸

Moving Forward: Improving Lives, Communities, and Economies

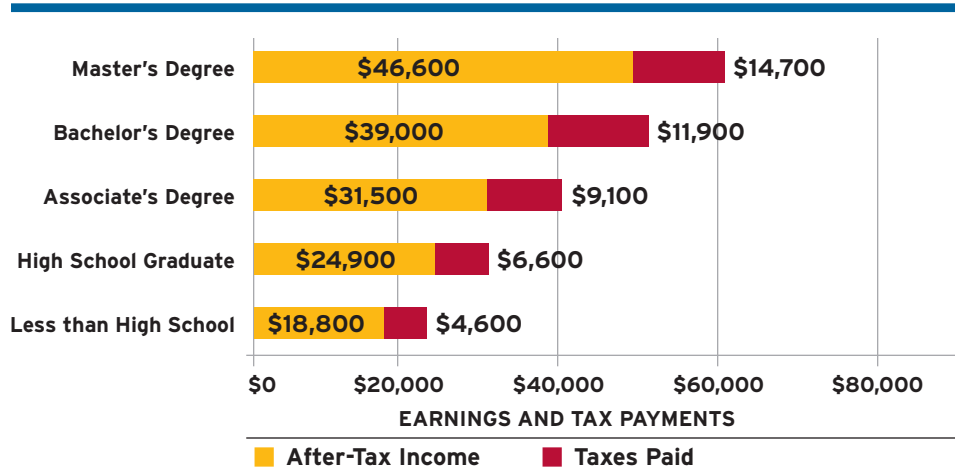
Together, we can improve the quantity and quality of our K-12 education system's high school graduates by implementing improvements throughout the system. Our efforts must address each of the following elements:

- Early life experiences that impact a child's future school success;
- Academic achievement in every grade as the foundation for high school completion; and
- College and workforce readiness that enables all youth to successfully transition from high school to work or post-secondary education.

Progress on all three of these key issues will ensure that Georgia's students graduate from high school on time, prepared to enter post-secondary education or the

workforce. Our students will then be equipped to provide for themselves and their families and make a positive contribution to their communities.

Figure 6. Median Earnings and Tax Payments by Education Level, 2005



Source: Baum, S. and Ma, J. "Education Pays: The Benefits of Higher Education for Individuals and Society." College Board, 2007. Median earnings and tax payments are by full-time, year-round workers age 25 and older. Taxes paid include federal income, Social Security, and Medicare taxes, and state and local income, sales, and property taxes.

Figure 7. Compounded Impacts of High School Non-completers



Source: Levin, H., Belfield, C., Muenning, P., and Rouse, C. "The Costs and Benefits of an Excellent Education for All of America's Children." Center for Benefit-Cost Studies of Education at Teachers College, January 2007.

⁷ Levin, H., Belfield, C., Muenning, P., and Rouse, C. "The Costs and Benefits of an Excellent Education for All of America's Children." Center for Benefit-Cost Studies of Education at Teachers College, January 2007.
⁸ Ibid.

Key Issue # 1: Early Life Experiences

The early years of a child's life indelibly shape his or her future.

During the critical time between birth and age five, when the brain undergoes its most rapid development, children learn more than during any other five-year period of life.

Yet the least amount of money is spent on children's education during this time. Early experiences influence the development of children's cognitive and social skills and behavioral and emotional health. Thus, the first years of life largely determine a child's readiness for school and may be predictive of future academic success.

Children whose early years are spent in an environment that meets their basic physical, emotional, cognitive, and social needs are better prepared for the school experience. Yet not all children are provided the experiences and resources needed to succeed in school, and so they enter kindergarten at many different developmental stages and with a wide range of abilities. According to the *2009 National KIDS COUNT Data Book*, Georgia has an overall rank of 42 among all 50 states on ten measures of child and family well-being.⁹ Interventions are needed to enrich the development of all children and start them off fully able to succeed in school.

Early risk factors are cumulative and all contribute to lower academic achievement in school. Health factors including birth

weight, neonatal health, and the health of the mother; poverty indicators such as mother's education level and family employment and income; and early learning opportunities for development and increased skills collectively impact success in school. By addressing the impacts of child well-being, health, and early learning opportunities on children's first years, we can positively impact a child's future success in school.

Child Well-Being and Economic Security

A nurturing environment is one that adequately meets a child's needs - physical, cognitive, emotional, and social - and fosters his or her healthy development. Yet for a child born into an insecure environment, the capacity for healthy development is compromised by multiple risk factors, including a lack of basic comforts, poor nutrition, minimal opportunities for stimulation and enriching activity, and unpredictable or unstable surroundings.¹⁰ Such instability in a child's first years of life will often have negative consequences on his or her future academic success. For this reason, ensuring a healthy and secure start in life for all children is an imperative and valuable economic investment.

Family income has been shown to be a particularly strong indicator of children's future difficulty in school, and studies show that children who live in low-income households during their early years are less likely to achieve successful academic outcomes. In fact, a family's low-income

status during children's preschool and early school years exhibits a strong correlation with lower rates of high school completion.

- In 2008, the average rate of child poverty in Georgia - defined as the percentage of children under age 18 who are living in families with income below the federal poverty level - was 20 percent.¹¹ In many counties, however, the child poverty rate approaches 50 percent, as illustrated in figure 8.
- In 2008, 42 percent of Georgia's children lived in low-income families, with low-income families defined as below 200 percent of the poverty threshold.¹²
- In 2010, 56 percent of Georgia's K-12 public school students are eligible under federal guidelines to receive free or reduced price school meals.¹³
- Georgia's high school graduation rate in 2009 was 73 percent for economically disadvantaged students. For non-economically disadvantaged students, the rate was 83 percent.¹⁴

Education is key to breaking the cycle of poverty. Children whose parents have lower levels of education are more likely to live in poverty. Data from a national research center show that in Georgia, more than half of young children whose parents do not have a high school degree live in poor families (as depicted in figure 9).

9 Annie E. Casey Foundation. "2009 KIDS COUNT Data Book: State Profiles of Child Well-Being." Retrieved from <http://www.aecf.org>.

10 Hodgkinson, H. L. "Leaving Too Many Children Behind: A Demographer's View on the Neglect of America's Youngest Children." Institute for Educational Leadership, April 2003.

11 Annie E. Casey Foundation. "2009 KIDS COUNT Data Book: State Profiles of Child Well-Being." Retrieved from <http://www.aecf.org>.

12 National Center for Children in Poverty. "Georgia Demographics of Low-Income Children." September 2009. Retrieved from http://www.nccp.org/profiles/state_profile.php?state=GA&id=6.

13 Annie E. Casey Foundation. "2009 KIDS COUNT Data Book: State Profiles of Child Well-Being." Retrieved from <http://www.aecf.org>.

14 Georgia Department of Education, 2008-2009 State Report Card. Retrieved from <http://www.doe.k12.ga.us>.

Poverty's negative impact is often multiplied because it exacerbates other conditions that can affect a child's future success in school. Poverty can contribute to poor physical and mental health, developmental delays, unemployment, teenage pregnancy, crime, and drug use. Poverty also may reduce access to quality childcare and early learning opportunities that help build a foundation of skills that foster future school success. The unfortunate reality is that many children living in poverty are starting school without the verbal, mathematics, and basic life skills that they need to learn at high levels.

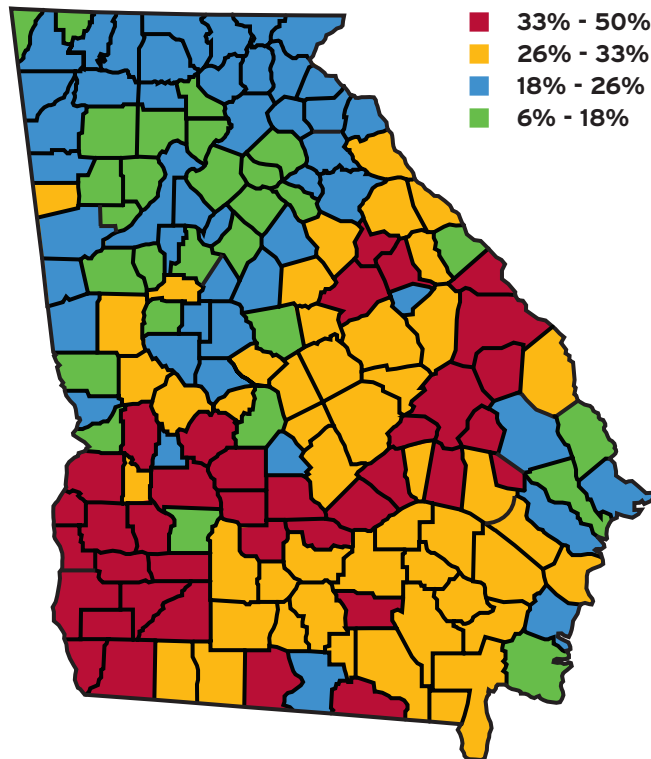
Before entering kindergarten, the average cognitive scores of preschool-age children in the highest socioeconomic group are 60 percent above the average scores of children in the lowest socioeconomic group.¹⁵ At age four, children who live below the poverty line are 18 months below what is normal for their age group; by age 10 that gap is still present. For children living in the poorest families, the gap is even larger.¹⁶

Figure 10 illustrates the gap in achievement scores for kindergarteners based on variations in family income. The early impact of poverty on educational attainment is glaring. In only their first year of school, poor children are already behind. The effects of child poverty continue well beyond the early years and are often associated with dropping out of school, behavioral, social, and emotional problems, and poor health.¹⁷

Healthy Beginnings for Children

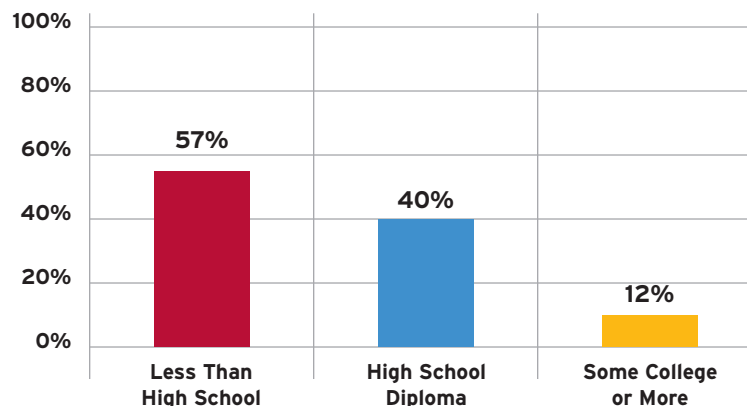
Healthy children become healthy students. The availability, quality, and cost of health care influence child development and school readiness.¹⁸ Poor health can lead to academic challenges throughout the K-12 school years, including the need for special education services, retention in a grade, and the non-completion of high school.

Figure 8. Children Living in Poverty, 2008



Source: Annie E. Casey Foundation. KIDS COUNT Data Center, 2008. In 2008, the federal poverty level for a family of four was \$21,200.

Figure 9. Rate of Child Poverty by Parental Education, 2008



Source: National Center for Children in Poverty. "Georgia Demographics of Young, Poor Children." September 2009.

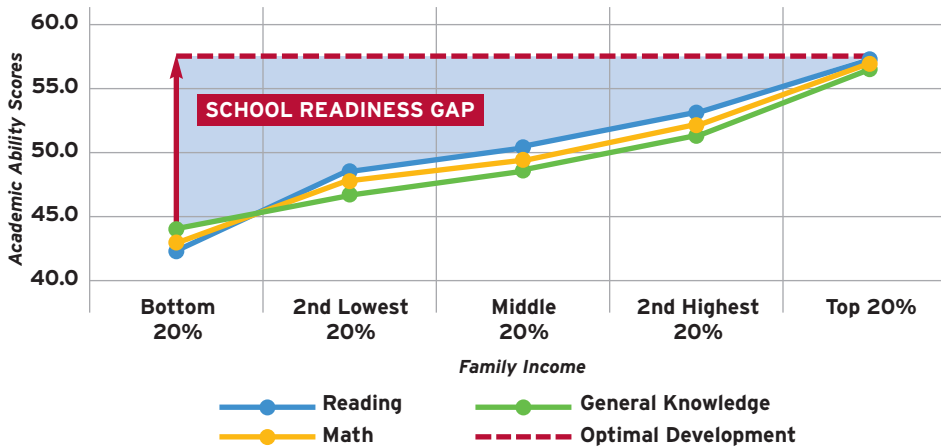
¹⁵ Klein, L. G. and Knitzer, J. "Promoting Effective Early Learning: What Every Policymaker and Educator Should Know." National Center for Children in Poverty, January 2007.

¹⁶ Ibid.

¹⁷ Cauthen, N. K. and Fass, S. "Ten Important Questions About Child Poverty and Family Economic Hardship." National Center for Children in Poverty, December 2009.

¹⁸ Rhode Island KIDS COUNT. "Getting Ready: Findings from the National School Readiness Indicators Initiative: A 17 State Partnership." February 2005.

Figure 10. Achievement Gap as Children Begin Kindergarten



Source: Barnett, W. S., Hustedt, J. T., Robin, K. B., and Schulman, K. L. "The State of Preschool: 2004 State Preschool Yearbook." National Institute for Early Education Research, 2004.

Quality Early Learning Opportunities

"Prevention is almost always cheaper than treatment. If we do not invest [in education] now, we most certainly will pay later."

- William Schweke, Research Director for the Corporation for Enterprise Development
Smart Money: Education and Economic Development, 2004

Whether or not children will become successful students depends largely on the quality of their early learning experiences. Research demonstrates the importance of providing young children with high quality early education experiences that help them develop the language, literacy, and pre-mathematics skills they will need to be ready for kindergarten.

Parents as Teachers

Parents remain the best and most consistent source of rich early learning experiences. Parents can stimulate their children's early learning through exposure to educational games, media, and the arts and by engaging children in everyday conversations with adults. Young children who are read to regularly by their parents develop better literacy skills, are better readers when they reach elementary school, and are more likely to succeed academically.²⁵ Yet research has found that family and home conditions vary widely across socioeconomic levels, which creates gaps in the foundational cognitive skills of young children. (See Insert: Read To Me! and Figure 11.)

Early, comprehensive prenatal care increases the likelihood that a child will be born healthy. Women who receive sufficient prenatal care are less likely to have premature or low birth weight infants and are more likely to obtain regular medical care for their children.

Premature birth and low birth weight can lead to a child's difficulty in school. Infants born weighing less than 5.5 pounds have an increased risk of physical and developmental problems and are more likely to be enrolled in special education classes or to repeat a grade during their schooling.¹⁹ A study of premature and low birth weight children found that lower reading and mathematics scores were predicted by these significant variables: lower maternal education and income, lower birth weight, and lower maternal health.²⁰ At age 17, low birth weight children were 50 percent more likely to score below average on reading and math tests than normal birth weight children.²¹

- The rate of late pre-term births (between 34-36 weeks gestation) in Georgia is 10.4 percent.
- Among uninsured women in Georgia, the rate of late pre-term births is 22.6 percent.
- Pre-term births cost the U.S. more than \$26 billion annually.²²

Children and families with health insurance are more likely to use primary health care services to address existing health conditions and prevent future health problems. A lack of health insurance can disrupt a child's school attendance and ability to participate in learning activities. Further, insufficient health care or delays in treating medical problems can negatively impact a child's physical and mental development.²³

- In 2007, 10 percent of Georgia's children under the age of 6 did not have health insurance.²⁴

19 Rose, S. A., Feldman, J. F., Jankowski, J. J., and Van Rossem, R. "Pathways From Prematurity and Infant Abilities to Later Cognition." *Child Development*, 76(6): 1172-1184, November/December 2005.
 20 Roberts, G., Bellinger, D., and McCormick, M. C. "A Cumulative Risk Factor Model for Early Identification of Academic Difficulties in Premature and Low Birth Weight Infants." *Maternal and Child Health Journal*, 11(2): 161-172, March 2007.
 21 Breslau, N., Paneth, N. S., and Lucia, V. C. "The Lingering Academic Deficits of Low Birth Weight Children." *Pediatrics*, 11(4): 1035-1040, October 2004.
 22 March of Dimes. "2009 Preterm Birth Report Card." November 2009. Retrieved from http://www.marchofdimes.com/georgia/37560_62773.asp.
 23 Annie E. Casey Foundation. KIDS COUNT State Level Data Online, 2009. Retrieved from <http://www.kidscount.org/sld/compare.jsp>.
 24 Ibid.
 25 Rhode Island KIDS COUNT. "Getting Ready: Findings from the National School Readiness Indicators Initiative: A 17 State Partnership." February 2005.

- Children living in poverty are less likely to be read to daily than their peers in non-poor households.²⁶
- Children of lower-income families enter school with smaller vocabularies than children of the same age in professional families.²⁷

- To borrow words of researchers at the Economic Policy Institute, “the inequalities of children’s cognitive ability are substantial right from ‘the starting gate.’ ”²⁸

High-Quality Pre-kindergarten Programs

Fortunately, high-quality early education programs can benefit children at risk and

help close the early achievement gap for disadvantaged students. Pre-kindergarten programs are a source of rich learning opportunities and help to promote school readiness for children in their preschool years. There are numerous positive effects, both immediate and long-term, of pre-kindergarten programs, which include:

- Improved language, listening, word analysis, vocabulary, and math skills;
- Higher reading and math achievement from 6-15 years of age;
- Lower rates of grade retention and special education placement;
- Decreased likelihood of dropping out of school; and
- Decreased likelihood for involvement in the juvenile justice system.²⁹

Read To Me! Among U.S. Families, Who is Reading to Their Children?

Children living in families below the poverty threshold are less likely to be read to daily than their peers in non-poor households.

PERCENT OF CHILDREN AGES 3-5 READ TO EVERY DAY

In families below poverty	39.7%
In families 100-199% above poverty	49.6%
In families 200% above poverty	63.9%

Data for 2007. Source: 2009 Federal Interagency Forum on Child and Family Statistics.

Similarly, children whose mothers have lower education levels are less likely to be read to daily than children whose mothers are more educated.

PERCENT OF CHILDREN AGES 3-5 READ TO EVERY DAY

Mother’s Education Level:

Less than high school	30.8%
High school diploma	39.4%
Some college	54.6%
Bachelor’s degree or higher	73.7%

Data for 2007. Source: 2009 Federal Interagency Forum on Child and Family Statistics.

The benefits of a quality preschool education extend throughout a child’s life. Preschool impacts cognitive development, social and emotional development, and academic achievement. Preschool is also linked to lower rates of delinquency and crime. By the third grade, one-third of the achievement gap is closed as a result of preschool education.³⁰

Figure 11. Children’s Language and Word Use Differs Across Income Groups

Measures of Language	Families of Upper Socioeconomic Status	Families on Welfare
Recorded Vocabulary Size	1,116	525
Utterances Per Hour	310	168
Different Words Used Per Hour	297	149

Source: Hart, B. and Risley, T. R. “The Early Catastrophe: The 30 Million Word Gap by Age 3.” *American Educator*, 27(1), Spring 2003. Children in the study were age 34-36 months.

A well-known longitudinal research study of the Perry Preschool program further substantiates the gains from a preschool education. The study compares the results of 123 African-American children born into poverty. As depicted in figure 12, those individuals who participated in the preschool program had significantly better outcomes over the course of their lives than the students who were not enrolled in any preschool program. In addition, the economic benefit to investing in these children far outweighed the costs (see figure

26 Federal Interagency Forum on Child and Family Statistics. “America’s Children: Key National Indicators of Well Being, 2009.” Retrieved from <http://www.childstats.gov>.

27 Hart, B. and Risley, T. R. “The Early Catastrophe: The 30 Million Word Gap by Age 3.” *American Educator*, 27(1), Spring 2003.

28 Lee, V. E. and Burkam, D. T. “Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin School.” Economic Policy Institute, November 25, 2002.

29 University of Pittsburgh Office of Child Development. “Investing Today for Tomorrow: The Costs and Benefits of Early Childhood Care and Education.” June 2003. Retrieved from <http://www.education.pitt.edu/ocd/publications/sr2003-06.pdf>.

30 National Institute for Early Education Research. “Long-Term Studies Show Lasting Gains From Pre-K.” *Preschool Matters*, 8(1), January/February 2010. Retrieved from <http://nieer.org/psm/index.php?article=306>.

13). Research on the financial impact of the Perry Preschool program has found that every \$1 invested returned \$17 to society and individuals over the course of forty years.

Georgia has received national attention for its exemplary state-funded pre-kindergarten program. According to the National Institute for Early Education Research, the Georgia Pre-K Program was the first preschool education program in the United States made universally available to all four-year-olds in a state. For the 2007-2008 school year, Georgia ranked third in the country for its rate of access to pre-kindergarten for four-year-olds.³¹

Georgia's commitment to increasing access to pre-kindergarten is backed by

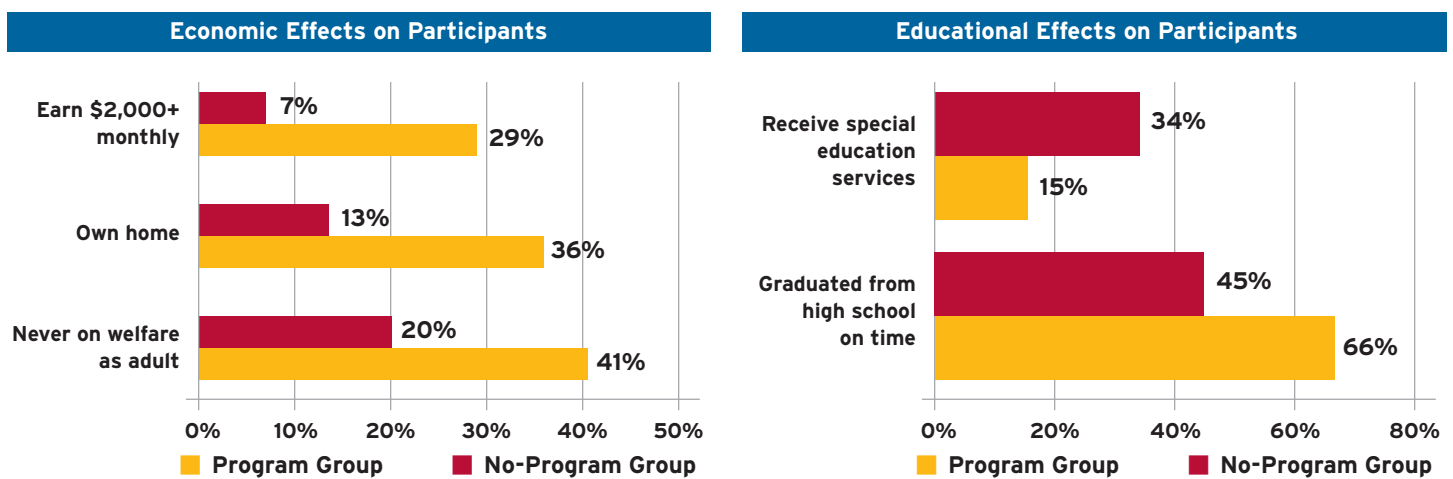
compelling economic research such as the outcomes of the Perry Preschool program. Additional studies have bolstered the evidence that investments in the early years are the most cost effective ways to improve students' ultimate success in school. Consider the following:

- The greatest amount of brain growth occurs between birth and age 5. In fact, by age 3, roughly 85 percent of the brain's core structure is formed.
- In contrast, the majority of our investments in education are made in the traditional education years of K-12, which begin at age five (see figure 14).

- Economic studies suggest that investments in quality child care and education for children in their preschool years provide a return of 14 to 15 percent.³²

All resources invested in learning during the early years yield a high return on investment. Investments in early education programs and high-quality childcare not only benefit parents and their children, but businesses as well. Employees with inadequate childcare are more likely to be late for work, absent from work, or distracted on the job. Absenteeism caused by poor quality childcare costs U.S. businesses more than \$3 billion a year. Early educational programs for Georgia's children are a building block for an educated workforce in our state.

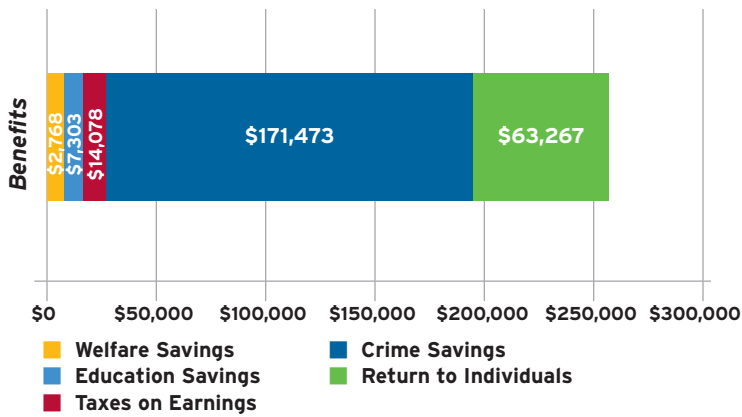
Figure 12. The Perry Preschool Study: Positive Impacts of Early Education Programs



Source: Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., and Nores, M. "Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40 (Monographs of the High/Scope Educational Research Foundation, 14)." Ypsilanti, MI: High/Scope Educational Research Foundation, 2005.

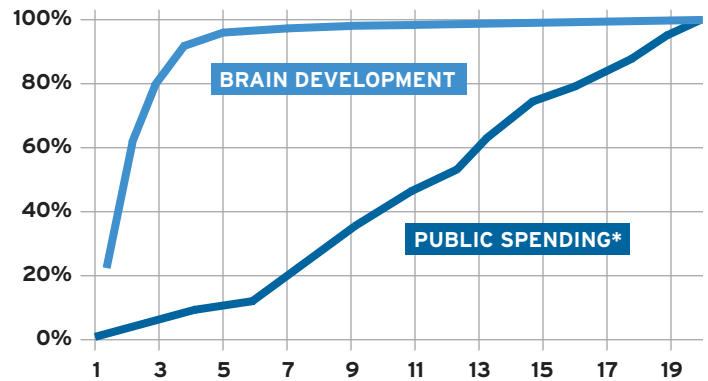
31 Barnett, W. S., Epstein, D. J., Freidman, A. H., Boyd, J. S., and Hustedt, J. T. "The State of Preschool 2008: State Preschool Yearbook." National Institute for Early Education Research, 2008.
 32 Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., and Nores, M. "Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40 (Monographs of the High/Scope Educational Research Foundation, 14)." Ypsilanti, MI: High/Scope Educational Research Foundation, 2005.

Figure 13. Economic Return on Investment in Early Education: The Perry Preschool Example



Source: College Board. "Coming to Our Senses: Education and the American Future." December 2008.

Figure 14. Public Spending & Brain Development: The Disconnect, 2005



* Portion of total public investment in children being spent during indicated year in children's lives

Source: The RAND Corporation and Voices for Georgia's Children. "The Economic Case for Investment in Early Childhood Development." 2005.

Ways to Make a Difference in Early Life Experiences

Look up, analyze, and share data about the health and well-being of children in your county or region. Visit the websites of organizations such as Family Connection Partnership, Voices for Georgia's Children, and the Georgia Children's Health Alliance to access current data and information.

Encourage parents to read to their children - beginning at infancy - every day. Help employees and friends locate literacy classes if necessary. Start a book of the week club to encourage daily reading to children.

Develop quality early learning experiences for all children through Pre-K programs, childcare, and other enrichment opportunities. Provide access for all children to quality early learning experiences through affordable, well-organized programs.

Support schools, businesses and community organizations as they advocate quality prenatal care, healthy development of babies, affordable health care, and effective parenting skills. Provide funding for local programs.

Provide advertising assistance by donating billboard and newspaper space, televisions and/or radio ad time, and encourage friends and employees to participate.

Educate your workforce about the importance of prenatal care, parenting skills, and early learning opportunities. Hang posters. Invite experts to conduct Lunch & Learn sessions. Provide or subsidize childcare.

Encourage community-wide strategic planning to improve all aspects of children's lives. Contact the Georgia Partnership for Excellence in Education and your local Family Connection Partnership representative for assistance in hosting a strategic planning session focused on the well being of children. Use local indicators of success including children's health, school readiness, and school success measures.

Support schools, businesses, and community organizations as they provide parenting skills workshops. Find out when sessions are offered and share the infor-

mation with your friends and co-workers. Attend a session yourself to set an example and encourage others to follow.

Support the medical community as it educates the public regarding quality prenatal care and the healthy development of babies. Make sure that quality local obstetricians and pediatricians are available on your company's health plan. Invite local doctors to share information at your workplace, civic, or religious group.

Focus the community on the necessity of sufficient resources for high quality childcare. Provide or subsidize childcare for your workforce. Work with government leaders to design childcare programs that also support the business community.

Reinforce in the workplace that parents are their child's first teachers. Support employees when they need flexibility to care for their children. Encourage employees to obtain parenting skills training. Create a lunch-time study group to share parenting experiences, resources, and encouragement.

Key Issue #2: Academic Achievement in Every Grade

Each grade in a child's school career, from kindergarten through 12th grade, is an important building block contributing to the ultimate quality of the child's total education.

If the academic content of any of these grades is not mastered at the appropriate time, there is a negative effect on the remainder of the education process. In order to have a successful school career, students must be able to read and calculate on grade level each year.

Georgia's Student Achievement on a National Scale

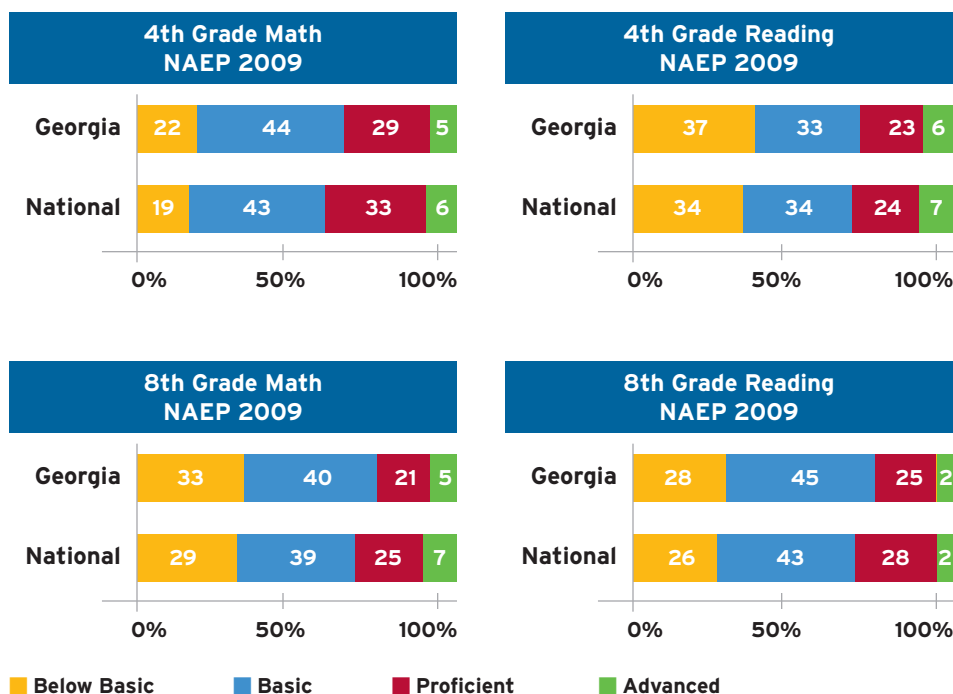
Individual states create assessments that align with their state curriculum to measure students' academic progress. These assessments differ from state to state and often change over time, thereby making long-term comparisons or comparisons among different states unreliable. The National Assessment of Educational Progress (NAEP) - a federally-mandated program run by the U.S. Department of Education - is the only nationally representative and continuing assessment of

what America's students know and can do in various subject areas.³³ The NAEP, also known as "the Nation's Report Card," enables a comparison of Georgia students with the rest of the nation and provides a reliable measure of the state's academic progress. Students who complete a rigorous high school curriculum or have grade point averages among the top 25 percent of high school graduates have higher average NAEP scores.³⁴ Thus, the NAEP is a critical indicator of how well we are preparing Georgia students to be academically competitive with their peers across the country. Figure 15 indicates how well Georgia students scored in comparison with the national average on recent NAEP measurements.

Over recent years Georgia has made some progress toward improving student outcomes as evidenced by the NAEP results. Yet the performance of Georgia's students on the NAEP lags behind the national average in many areas. The state needs to accelerate progress in all areas in order to prepare our students for future success. Consider the following:

- On all four tests, the percent of Georgia students scoring at or above Proficient is below the national average.
- In comparison with the nation, Georgia has a greater percentage of students scoring Below Basic on all four tests.

Figure 15. NAEP Math & Reading Scores in Georgia & the U.S., 2009



Source: U.S. Department of Education, National Center for Education Statistics. NAEP State Profile, 2009.

33 NAEP results indicate student achievement at a point in time. NAEP assess different students each year. It does not indicate individual students' progress over time.

34 The Nation's Report Card. "America's High School Graduates: Results from the 2005 High School Transcript Study." February 2007. Retrieved from http://nationsreportcard.gov/hsts_2005.

State Measures of Student Progress

In 2004, Georgia's education leaders adopted a new curriculum - the Georgia Performance Standards (GPS) - that provides clear expectations for assessment, instruction, and student work. Based on best practices that have proven to be effective in high-performing states and nations, the revised and strengthened curriculum drives both instruction and assessment in Georgia's schools.³⁵

To assess students' mastery of the curriculum, Georgia administers the

Criterion-Referenced Competency Tests (CRCT) in reading, English/language arts, and mathematics in grades 1-8, and in science and social studies in grades 3-8. Scores below a specified level of performance on the CRCT indicate that a student does not meet the standard in that subject area. Students performing at this level may need additional instructional support. For Georgia students in grades 3, 5, and 8, performance on the state CRCT carries increased weight, as an insufficient score in these critical grades can result in retention. Students in the 3rd grade who score below grade level in reading and students

in the 5th and 8th grades who score below grade level in reading and/or mathematics must be provided additional instruction and subsequently retested. Georgia law mandates that if a student scores below grade level again on the retest, he or she must be retained.³⁶

Performing well on the CRCT is important because it provides an indicator of future academic success:

- Students who are not reading on grade level by the end of 3rd grade are much less likely to graduate from high school.³⁷
- Children who are not calculating geometry and algebra on grade level by the end of 8th grade are less likely to be successful in post-secondary education.³⁸
- Students who take rigorous mathematics and science courses are much more likely to go to college than those who do not.³⁹

Figure 16. Performance of Georgia Students on the CRCT, 2009

Content Area	Grade	# Students Tested	% Not Meeting Standards	# Students Not Meeting Standards
Reading	3rd	129,827	12.0	15,579
	5th	125,532	12.1	15,189
	8th	121,229	7.3	8,850
Mathematics	3rd	130,061	22.1	28,743
	5th	125,815	20.7	26,044
	8th	121,362	29.9	36,287

Source: Georgia Department of Education, 2009.

Figure 17. Performance of Georgia Students on the CRCT by Race, Spring 2009

Content Area	Grade	% White Students Not Meeting Standards	% Black Students Not Meeting Standards	% Hispanic Students Not Meeting Standards
Reading	3rd	7	18	15
	5th	7	18	16
	8th	4	11	11
Mathematics	3rd	13	33	24
	5th	14	29	23
	8th	21	42	35

Source: Georgia Department of Education, 2009.

Figure 16 shows the number of children in Georgia who scored below grade level on the spring 2009 administration of the CRCT. Roughly one out of every five third and fifth grade students in Georgia fails to meet standards on the mathematics section of the CRCT, and nearly one in three eighth grade students performs below standards. When the data is disaggregated by race, the differences in the level of achievement become even more profound (see figure 17).

Economic Consequences of Low Student Achievement

When a student fails to achieve proficiency on the CRCT, he or she faces being retained in that grade or subject for one more year. Consider the impact on the state if each of these students were

35 For more information about Georgia's curriculum, see the Department of Education's website at <http://www.georgiastandards.org>.

36 A team comprised of the parent, a teacher, and an administrator can unanimously promote the student to the next grade level despite CRCT performance. Source: Georgia Department of Education Promotion and Retention Guidance. Retrieved from http://public.doe.k12.ga.us/pea_policy.aspx?PageReq=PEARetention.

37 Education Commission of the States. "P-16 Quick Facts." 2007. Retrieved from <http://www.ecs.org>.

38 Horn, L. and Nuñez, A. "Mapping the Road to College: First-Generation Students' Math Track, Planning Strategies, and Context of Support." NCES 2000-153. U.S. Department of Education, National Center for Education Statistics, March 2000.

39 U.S. Department of Education. "Mathematics Equals Opportunity." October 1997. Retrieved from <http://www.ed.gov/pubs/math/index.html>.

retained – in the short-term, the fiscal burden of providing these students an additional year in school, and in the long-term, the reduced likelihood of their graduating from high school in the future.

Indeed, the financial burden of student retention to the state and local communities is substantial. When a student has to repeat a grade, he or she spends an additional year in the K-12 education system. With the expense to the state of educating a child for one year in Georgia averaging \$8,909, retention becomes a costly problem.⁴⁰ Consider the big picture, as shown in figure 18:

- At the end of Georgia's 2008-09 school year, 61,642 students were retained – 3.8 percent of the total enrollment.

- An additional year in school for each of those students costs the state an average of \$8,909, adding up to an exorbitant sum for Georgia.

How much of a cost burden is the epidemic of student retention likely to pose in your own community? Use the steps in figure 19 to make a basic calculation. Be aware that these calculations represent only the additional costs incurred the next year. The actual costs over time might be even greater should those same students be retained additional times during their school career. And within the next 10-15 years, the community will bear additional costs should any of those students fail to complete high school as a result of their early academic challenges.

National research underscores the severe economic consequences of states' failure to educate all students to high levels of proficiency. According to research published by McKinsey & Company, "each of the long-standing achievement gaps among U.S. students of differing ethnic origins, income levels, and school systems represents hundreds of billions of dollars in unrealized economic gains."⁴¹ This research determines that had the U.S. closed the achievement gap between white students and black and Latino students, the Gross Domestic Product (GDP) would have been between \$310 billion and \$525 billion higher in 2008. Also, had the U.S. closed the achievement gap among low performing states on the NAEP, the GDP would have been between \$425 billion and \$700 billion higher. Economically, these numbers represent the equivalent of a permanent national recession in our country.⁴²

Figure 18. Student Retention in Georgia, 2009

61,642	X	\$8,909	=	More than \$549 million
Georgia students retained in 2009		Average annual cost of education per student		Total cost of student retention in 2009 for Georgia

Figure 19. The Cost of Student Retention in Your Community - You Do the Math

1. Visit www.gaosa.org to look up the number of children retained in your school or district as reported by the Governor's Office of Student Achievement.
2. Multiply the number of students by the cost of one year in your school system.

Number of Students Retained in 20__	Multiply by Annual Cost to Educate One Student in Your School System	Total Annual Cost to Re-Educate Retained Students
_____	\$ _____	= _____
Cost of Student Retention This Year: \$ _____		

40 Georgia Department of Education. FY 2009 School System Financial Reports. Retrieved from <http://www.doe.k12.ga.us>.
 41 Auguste, B. G., Hancock, B., and Laboissière, M. "The Economic Cost of the U.S. Education Gap." McKinsey Quarterly, June 2009.
 42 McKinsey & Company. "The Economic Impact of the Achievement Gap in America's Schools: Summary of Findings." April 2009.

Ways to Make a Difference in Academic Achievement in Every Grade

Encourage schools to plan strategically.

Serve on a school council. Volunteer (yourself or your employees) to facilitate strategic planning sessions. Encourage your local board of education to maintain a long-term view when implementing new strategies.

Participate in the Georgia Partnership's Annual Bus Trip.

Recognize and reward the academic successes of schools across the state. Then plan a local bus trip to highlight the achievements of your local school system.

Support educators as they analyze data to make decisions about school improvement.

Review local student achievement data to become familiar with current levels of achievement. Volunteer (yourself or your employees) to participate in data analysis. Provide a facilitator, space, refreshments, and/or supplies for a strategic planning session. Connect with Georgia Leadership Institute for School Improvement (www.glisi.org) to support leadership development.

Work with educators to design evaluation systems for school improvement initiatives.

Share your expertise regarding goal setting, data collection and evaluation, measurements and metrics, and Balanced Scorecards. Volunteer to serve on an evaluation committee.

Encourage the students in your life to enjoy and succeed in their school career.

Ask the children in your life (employees, children, friends) about their grades, efforts, attendance, and school experience. Encourage extracurricular activities (such as debate, quiz teams, and language clubs) that facilitate improvement in academic success. Recognize, praise, and reward students (your own and those across the community) for academic achievement through articles in the paper or club newsletters, special discounts on goods and services, special events, or cash prizes.

Support tutoring programs in your community.

Volunteer your time, make a financial contribution, or provide in-kind support to tutoring programs offered by schools, businesses, and community organizations. Share schedules and contact information about these programs with your neighbors and employees. Connect with a local Junior Achievement office (www.ja.org) and volunteer your time to educate youth about entrepreneurship, work readiness, and financial literacy.

Encourage schools to provide additional learning time for students who need it.

Volunteer to help principals analyze their school schedules and identify creative ways to increase instructional time. Organize others in your community to influence the local board of education to approve measures such as extended school hours or year-round school attendance. Learn about the Georgia Virtual School (www.gavirtualschool.org) and encourage schools and students in your community to pursue this opportunity.

Encourage students to pursue additional learning opportunities.

Urge schools to offer higher level, rigorous courses (such as Advanced Placement courses in high school) and encourage local students (including your own) to enroll in them. Create scholarships that allow students to attend summer school and college sessions. Work with educational leaders to design academic enrichment programs that your community organization can offer to students.

Establish a business partnership with one or more schools in your community.

Explore ways that your organization can sponsor academic enrichment programs that support school improvement initiatives or conduct process management reviews for support services departments. Contact your local Communities in Schools office and offer to participate in a mentoring or career awareness initiative or volunteer to serve as a Community Coach.

Ask local educational leaders to identify how you can help.

Contact your local board of education, superintendent, and principals to identify their specific needs. Invite educational leaders to speak to your business or community organization. Ask questions to increase your understanding of the policy issues that affect student success.

Provide a work environment that encourages the involvement of employees in their children's activities and education.

Provide flextime, matching leave, job-sharing, or time off so that parents can get involved in their child's education. Provide in-house publications that emphasize the importance of parental involvement at every stage of a child's life.

Encourage and enable your district to participate in the premier leadership program for Georgia's educational leaders and aspiring leaders, Georgia Leadership Institute for School Improvement (GLISI).

Visit www.glisi.org for information about this unique experience, which blends best practices from business leadership with powerful content on school improvement and academic achievement. Encourage your superintendent to send district teams to each event. Make a corporate contribution or in-kind partnership to ensure continued and expanded offerings by GLISI.

Key Issue #3: Transition to Work or Post-Secondary Education

Traditionally, the attainment of a high school diploma signals that a student is ready to enter the workforce or pursue postsecondary education.

Sadly, some employers and institutions of higher education now view a high school diploma with some skepticism. Good grades on a high school transcript do not always translate to a mastery of content knowledge or the development of critical thinking skills. Most colleges and universities require admissions exams to demonstrate college-readiness. Even with these additional measures, many students enter college having to enroll in remedial classes. Similarly, employers who hire high school graduates need to provide remediation in basic skills to many of their workers. There is a large expectations gap – a gap between what students know and what they need to know in order to be successful in the workforce or postsecondary education.⁴³ Closing this gap is essential to making certain that Georgia's students are prepared for success after high school.

School to Work

Georgia demonstrates a strong commitment to preparing students for success after high school. Georgia is now one of twenty states, plus the District of Columbia, that requires all students to complete a college- and career-ready curriculum to graduate.⁴⁴ Because a significant number of students choose not to

attend college, it is important that students have the skills to be successful in the workforce immediately after graduating from high school.

Career and Technical Education

Historically, vocational education was viewed as a path for students who lacked the desire or skill to pursue higher education. Currently, vocational education is a valuable aspect of our educational programs.

As our economy becomes even more connected with the rest of the world, the demand for highly skilled laborers will continue to grow. Tomorrow's jobs will require workers who not only possess specialized skills, but workers who have the intellectual capacity to acquire new skills. The Career, Technical, and Agricultural Education (CTAE) division of the Georgia Department of Education helps to prepare students to meet the demands of our increasingly global

economy. CTAE offers an array of programs designed to help students prepare for promising careers (see figure 20). The majority of Georgia's students enroll in the program – 64 percent of all high school students and 56 percent of all middle school students enrolled in at least one CTAE course during the 2007-2008 school year.⁴⁵ The program is yielding positive results. The high school graduation rate of students with CTAE concentrations in 2008 was 91 percent compared to the state overall rate of 75 percent.⁴⁶

Encouraging participation in CTAE is key to improving graduation rates and preparing students for future career success. Numerous opportunities for employment exist in specialized fields such as health care and information technology but not enough students graduate with the qualifications to fill these positions. CTAE program areas not only help to fill in these gaps, but they can prepare students for tomorrow's jobs as well.

Figure 20. CTAE Program Areas Offered in Georgia

• Agricultural Education	• Business & Computer Science	• Marketing, Sales & Service Education
• Architecture, Construction, Communications, & Transportation	• Engineering & Technology Education	• Coordinated Career Academic Education
• Culinary Arts	• Family & Consumer Sciences	• Career & Technical Instruction
	• Healthcare Science Education	

Source: Georgia Department of Education. "Career, Technical and Agricultural Education Annual Report 2008." Not all programs are offered at the middle school level.

43 Achieve. "Closing the Expectations Gap: Fifth Annual 50-State Progress Report on the Alignment of High School Policies with the Demands of College and Careers." March 2010.

44 Ibid.

45 Georgia Department of Education. "Career, Technical and Agricultural Education Annual Report 2008." Retrieved from <http://www.doe.k12.ga.us>.

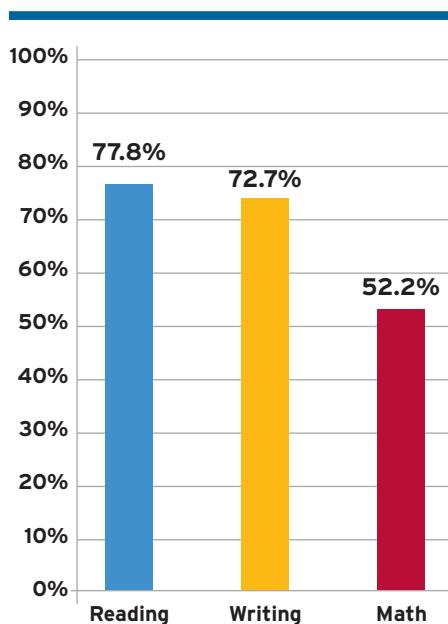
46 Ibid.

Job Readiness

Historically, we have given more challenging courses to high school students who were planning to attend college. Preparing students to transition from high school to careers, however, requires just as much education as preparing our students to transition to college. The best-paid jobs with the greatest opportunities require higher-level thinking skills. Workforce careers such as electricians, construction workers, and plumbers may not require a four-year degree, but they require a high skill level. These careers offer the earning potential to support a family and offer opportunities for career advancement. According to one empirical study, these jobs require workers who are able to read for information and solve applied mathematics problems on a level comparable to students preparing to attend college.⁴⁷

Unfortunately, too many students graduate high school without these skills. In a survey of 217 employers, 34 percent stated that their recently hired high school graduates were deficiently prepared to enter the workforce.⁴⁸ Many companies have a need for workers with critical thinking skills but lack the resources to teach these skills to their workers. Some companies even explicitly state that they will not hire students who were not prepared in high school to read critically and reason mathematically; the benefits simply do not outweigh the costs, and the rate of turnover among young, less-experienced employees is too high. One study estimated the cost of remedial training to a state's employers at \$40 million per year.⁴⁹ Businesses that identify a need for such basic skills training often choose not to spend the money to fill in these gaps – as illustrated in figure 21. To ensure that our students are employable and to strengthen the quality of our workforce, it is critical that every high school student graduate with the skills necessary for successful entrance into the workforce.

Figure 21. Training Gaps in Basic Skills



This graph shows the percentage of employers who identify a need for basic skills remediation among their workforce, but choose not to provide that remediation. For instance, 77.8 percent of employers who identify a need for remediation in reading do not provide the resources for this training.

Source: Casner-Lotto, J., Rosenblum, E., and Wright, M. "The Ill-Prepared U.S. Workforce: Exploring the Challenges of Employer-Provided Workforce Readiness Training." The Conference Board, July 2009.

In addition to academic competence, employers have a need for workers with a number of applied skills such as creativity, teamwork, and leadership. Again, many of the companies who identify these skills as "high need" do not offer training for them. These areas are important both to career and college success, but are often overlooked in school in favor of academic preparation. Yet, we must make time to develop these qualities in students as well.

Because of our rapidly changing economy, we cannot predict with certainty what opportunities lie ahead for Georgia's

students. We cannot afford to short-change students by predetermining whether or not they need a college-preparatory curriculum. Nor can we fail to develop applied skills such as creativity and teamwork. Developing the ability to read, write, and think critically and creatively is essential to students' success whether or not they decide to pursue higher education.

School to Postsecondary Education

"All educational reform programs that seek to improve college readiness and success are grounded in the belief that larger numbers of students can succeed in college, given appropriate preparation, motivation, and support."

- Thad Nodine, Ph.D., "Innovations in College Readiness: How Early College Schools are Preparing Students Underrepresented in Higher Education for College Success," October 2009.

The goal of a college-preparatory program in high school is to ensure that students begin college with the tools to succeed. Many students, however, begin college with the need to enroll in remedial courses:

- Among 12th graders who enrolled in college between 1992-2000, 61 percent of those attending a two-year school and 25 percent of those attending a four-year school completed at least one remedial course.
- Among the students who took remedial courses, 57 percent of them earned a degree or certificate by 2000 if they had only one remedial course that was not in math or reading.
- Among students enrolled in any remedial reading courses, only 30 percent earned a degree or certificate by 2000.

47 ACT College and Workforce Training Readiness. "Ready for College and Ready for Work: Same or Different?" 2006.

48 Casner-Lotto, J., Rosenblum, E., and Wright, M. "The Ill-Prepared U.S. Workforce: Exploring the Challenges of Employer-Provided Workforce Readiness Training." The Conference Board, July 2009.

49 Greene, J. P. "The Cost of Remedial Education: How Much Michigan Pays When Students Fail to Learn Basic Skills." Mackinac Center for Public Policy, September 2000.

- In contrast, 69 percent of the 12th graders who did not enroll in remedial courses earned a degree or certificate by 2000 (see figure 22).⁵⁰

The U.S. Department of Education found that 95 percent of students who completed a high school curriculum at the highest level of academic intensity earned a bachelor's degree.⁵¹ Students who enter college prepared for college are far more likely to finish. As a nation and as a state, we must do a better job of getting our students ready for college-level work. A variety of strategies - including Advanced Placement courses, dual-enrollment programs, and challenging coursework - are critical toward the fulfillment of this goal.

"Curriculum rigor trumps just about everything else in predicting college success."

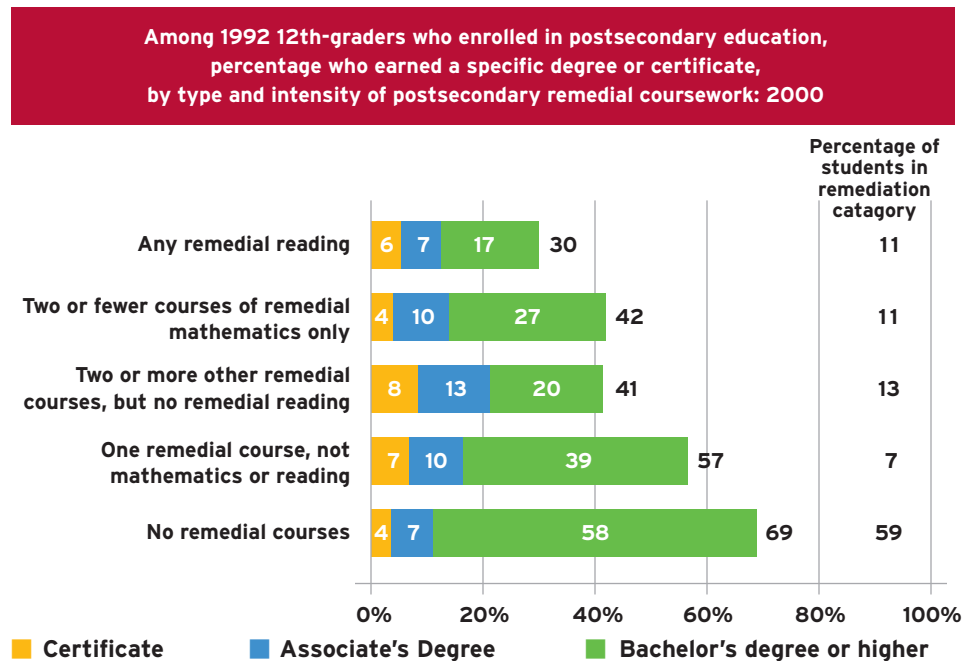
- Coming to Our Senses, December 2008

Advanced Placement Courses

The Advanced Placement (AP) Program began as a pilot project in the 1950s for bright high school juniors and seniors to engage in college-level work.⁵² It has since expanded to 17,000 schools nationwide.⁵³ Roughly 34 percent of Georgia's high school seniors participated in Advanced Placement courses in 2009 - as shown in figure 23. Although less than 18 percent scored well enough to receive college credit for the course, this is higher than the national rate of 15.9 percent.⁵⁴

Success on the AP exam is an indicator of future success in college. A study of students in Texas found that students who scored a 3 or higher on the AP exam were

Figure 22. Educational Attainment of Remedial Course takers



Source: U.S. Department of Education, National Center for Education Statistics. "The Condition of Education: Student Effort and Educational Progress." 2004.

more likely to graduate from college within five years than students who did not pass the exam, students who enrolled in AP courses and did not take the exam, and students who did not take any AP courses at all.⁵⁵ The research does not imply that schools should enroll more students in AP courses in order to prepare them for college. Rather, the research gives an indicator for how well schools are preparing students to do well on the AP exam, and subsequently in college. Georgia can be proud of its high rate of achievers on the exam compared with the rest of the nation and for its increase in participation and rate of achievement on the exam during the past five years.

Early College Program

As a person's level of education increases, so does financial stability. Thus, it is important to encourage as many students as possible to pursue higher education. For traditionally underrepresented populations, however, this goal often seems unattainable. In order to encourage the pursuit of postsecondary education among low-income students and ethnic minorities, the Bill and Melinda Gates Foundation partnered with other businesses and organizations to implement the Early College Program in 2002. The Early College Program exposes students to college-level work, and many students take classes on a college campus. There is no

50 U.S. Department of Education, National Center for Education Statistics. "The Condition of Education: Student Effort and Educational Progress." 2004. Retrieved from <http://nces.ed.gov/programs/coe/2004/section3/indicator18.asp>.

51 College Board. "Coming to Our Senses: Education and the American Future." December 2008. The highest level of academic intensity included 3-4 years of English, math, and science, and International Baccalaureate or Advanced Placement courses.

52 Nodine, T. "Innovations in College Readiness: How Early College Schools are Preparing Students Underrepresented in Higher Education for College Success." Jobs for the Future, October 2009.

53 College Board. "AP Program Facts." 2010. Retrieved from http://www.collegeboard.com/about/news_info/ap/faqs.html.

54 College Board. "The 6th Annual AP Report to the Nation." February 10, 2010.

55 Dougherty, C., Mellor, L., and Shuling, J. "The Relationship Between Advanced Placement and College Graduation." National Center for Educational Accountability, February 2006.

cost to students while they are in high school, thereby removing – at least initially – the financial hurdle to beginning a college career. Students can earn up to two years of college credit, including an Associate’s Degree, before even graduating from high school.

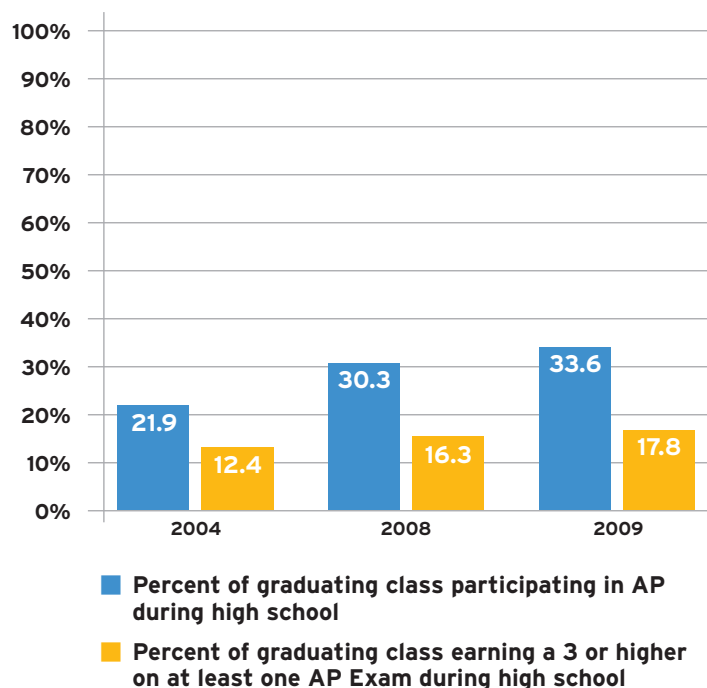
The Early College Program began with three schools during the 2002-2003 school year. It now serves students in 201 schools in 24 states, including Georgia. During the 2008-2009 school year, the program targeted students who needed this support:

- 74 percent were students of color;
- 56 percent were eligible for free or reduced lunch;
- 10 percent were English language learners; and

- 32 schools served students who previously dropped out of traditional high school or were at risk of dropping out.⁵⁶

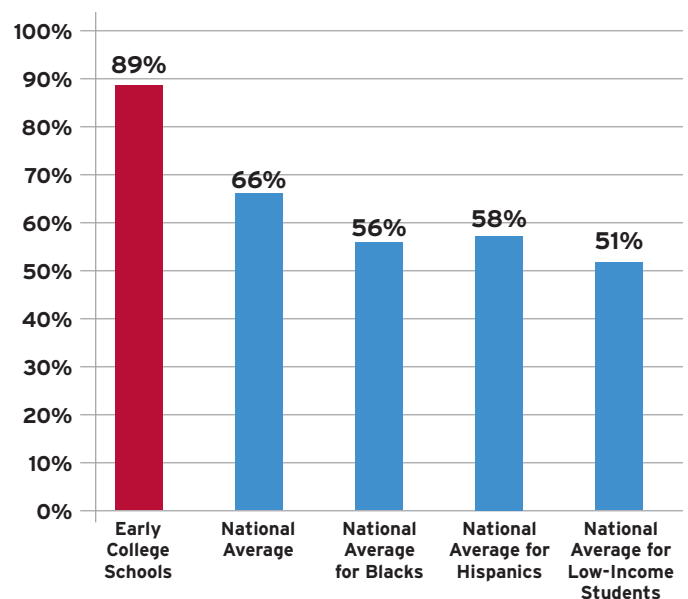
The results of the program have been impressive. In 2008, the national four-year graduation rate for Early College students was approximately 92 percent. In addition to being more likely to graduate high school, students graduating from Early College schools are more likely to enroll in college immediately after graduation, as shown in figure 24.⁵⁷ By focusing on students most at risk for dropping out of high school, the Early College Program has improved the chances of underrepresented students completing high school and enrolling in college, placing them on a path toward academic and career success.

Figure 23. Advanced Placement Participation and Performance in Georgia, 2004-2009



Source: College Board. “The 6th Annual AP Report to the Nation: Georgia Supplement.” February 10, 2010.

Figure 24. Percent of Graduates Enrolling in College Immediately After High School



NOTE: Low-income refers to the bottom 20 percent of all family incomes. Data for early college schools are for 2008; national averages are based on 2006 data, the most recent year available.

Source: Nodine, T. “Innovations in College Readiness: How Early College Schools are Preparing Students Underrepresented in Higher Education for College Success.” Jobs for the Future, October 2009.

56 Nodine, T. “Innovations in College Readiness: How Early College Schools are Preparing Students Underrepresented in Higher Education for College Success.” Jobs for the Future, October 2009.
57 Ibid.

Workforce Development

The largest portion of the U.S. labor market lies in middle-skills jobs – jobs that require more than high school, but not a four-year degree – as shown in figure 25. In fact, some of the money that we spend as a nation investing in higher education would be better spent on investing in middle-skills job training. The National Skills Coalition estimates that for every job requiring a bachelor's degree, nearly twice as many jobs require middle-skill training.⁵⁸ Unfortunately, far too many workers lack the training and skills for these jobs. Of those adults currently in the workforce, 57 percent of them have low literacy, limited English proficiency, or lack an education credential beyond high school. Even more strikingly, during July 2009 when the economy lost a quarter of a million jobs, 60 percent of employers had problems finding qualified applicants to fill vacancies.⁵⁹ Had we taken the time to train more

“As the skills gap widens among new entrants to the workforce, it’s clear that all stakeholders – employers, education, and the public workforce system – must collaborate to effectively prepare workers to be successful on the job.”

*- Tony Bingham, President and CEO,
American Society for Training and
Development*

high school graduates for middle-skill jobs, perhaps we could have reduced the impact of the economic recession for some families.

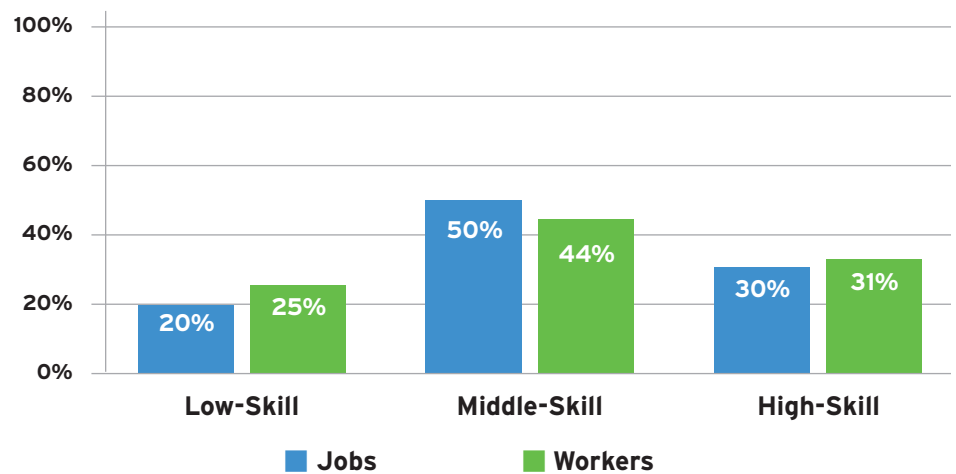
Making Georgia Work Ready

One effort to ensure that Georgia's workers are prepared to enter gainful employment is the Georgia Work Ready initiative. In 2006, Governor Sonny Perdue and the Georgia Chamber of Commerce

implemented Georgia Work Ready to help match employers with qualified job seekers. Georgia Work Ready includes the following components: Work Ready Certificate, Work Ready job profiling, Work Ready Region, and Certified Work Ready Community (see figure 26).⁶⁰

Georgia Work Ready seeks to involve all stakeholders in our state's economy to increase the number of adults prepared for the workforce. By offering free training and skills assessment, job seekers can better determine their qualifications for employment. The process benefits employers by simplifying the hiring process; employers can quickly determine which workers are prepared with the skills that they need based on the applicant's certificate level. Work Ready Regions collaborate to improve education, strengthen economic development, and help counties meet their goals to become Work Ready.

Figure 25. The Middle-Skills Gap Between Available Jobs & Qualified Workers, 2006



Persistent shortages of middle-skill workers inhibit industry growth and U.S. competitiveness.

Source: National Skills Coalition. "The Issues." Retrieved April 2010 from <http://www.nationalskillscoalition.org>.

58 National Skills Coalition. "Proportionate Investment? Why America Needs a Better Plan for Investing in People." Retrieved from http://www.nationalskillscoalition.org/the-issues/a-strong-economy/nsc_proportionateinvestment_2010-02.pdf.

59 National Skills Coalition. "The Issues." Retrieved April 2010 from <http://www.nationalskillscoalition.org/the-issues>.

60 Georgia Work Ready, 2009. Retrieved from <http://www.gaworkready.org>.

Figure 26. Components of Georgia Work Ready

Work Ready Certificate

- Measures core skills in applied mathematics, reading for information and locating information.
- Measures work-related attitudes and behaviors that are trainable such as cooperation and discipline.
- Free online training available to improve certificate level.

Job Profiling

- Compares a worker's certificate level with available jobs to help ensure successful employer-employee connections.
- At no cost to employers meeting minimum hiring requirements.
- Improve hiring procedures and reduce turnover and training costs.

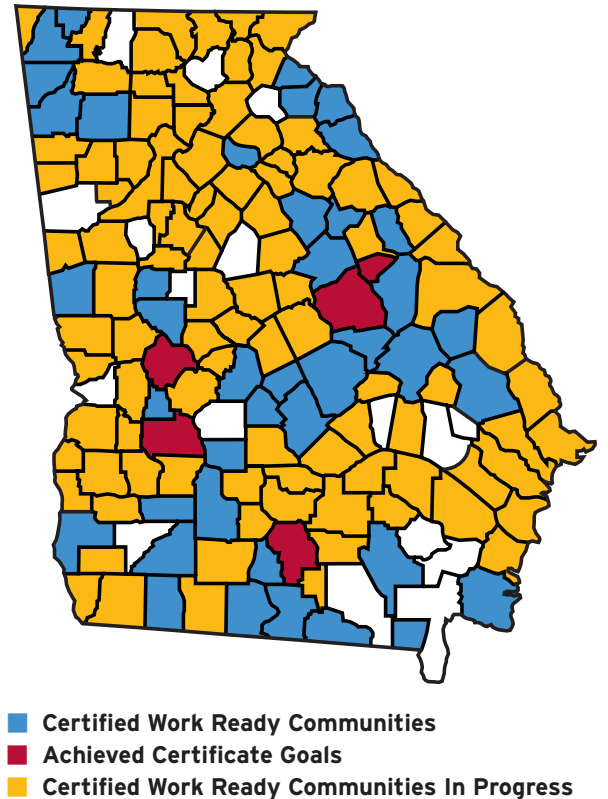
Work Ready Region

- 16 regions in Georgia focusing on different growth industries including advanced communications, advanced manufacturing, aerospace, bioscience, energy, and logistics.
- Each region is comprised of leaders from education, workforce, local development authorities, and economic development.
- Focus is on the goal of creating a long-term, viable workforce for the state economy.

Certified Work Ready Community

- Have enough Work Ready Certified workers for current jobs.
- Have enough talent capable of learning the technology for tomorrow's jobs.
- Demonstrated commitment to raising graduation rates.
- Promotes community engagement in meeting these goals.
- Completes all requirements within three years.
- Most counties are in the process of becoming Work Ready (See map of Certified Work Ready Communities).

Certified Work Ready Communities, March 2010



Source: Governor's Office of Workforce Development, Georgia Work Ready.

Ways to Make a Difference in Transition to Work or Post-Secondary Education

Foster strong academic preparation in high school. Challenge students to enroll in rigorous courses. Provide scholarships to students who cannot afford the cost of the Advanced Placement exams.

Promote students' pursuit of higher education. Sponsor a financial aid workshop at a local high school. Fund a scholarship for students in the Early College Program to offset the cost of tuition after high school.

Encourage schools to include workforce readiness skills in the curriculum. Emphasize the need for educators at all levels to develop skills such as creativity and teamwork in addition to the academic curriculum.

Sponsor internships and apprenticeships for high school students. Give students first-hand experience in the workforce.

Show them the connection between what they learn in the classroom and how it is applied in specific job fields.

Invite teachers and educational leaders to participate in corporate training. Show them how your organization develops skills such as creativity and leadership. Share a copy of your training curriculum with teachers so that they may begin to develop these skills in their students.

Encourage schools to provide meaningful professional development. Offer "real world" work experiences to teachers. Help them to make the connection between academic content and its application to specific jobs. Demonstrate model lessons that they can emulate in their classrooms. Participate in Georgia Tech's Georgia Intern-Fellowship for Teachers (GIFT).

Volunteer to speak at a school career day. Participate in a school-wide program, or offer to spend the day in a classroom. Stress the importance of mastering academic content and developing applied skills in order to be prepared to enter the workforce or postsecondary education.

Become a Certified Work Ready Facility. Formulate a plan to use Work Ready Certificates and Work Ready job profiles. Visit www.gaworkready.org to get started.

Support and encourage adult learning - GED, technical school, community college, university, and adult literacy programs. Volunteer to teach reading or English to adults in your community. Contribute to community organizations that offer such classes. Encourage your employees to continue their education and create office policies that enable them to do so. Help build awareness of opportunities for adult learning.

Community Support for School Improvement

The opportunity to improve the academic achievement of all students is not limited to educators alone.

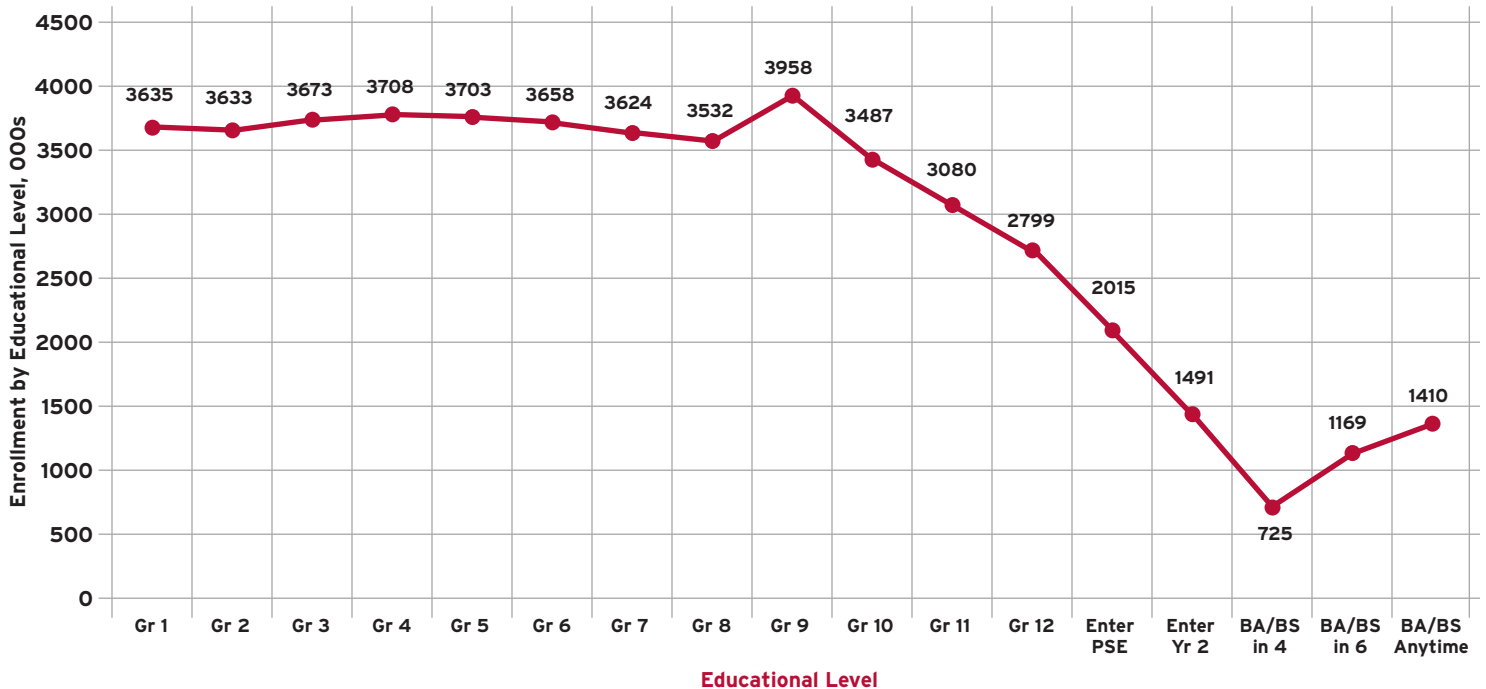
There is much the community can do to support local school improvement efforts. Business and civic leaders can work with educators to design ways to support and encourage the strategies schools are using to increase student learning. In fact, community support for public education is vitally important on several levels. Altruistically, communities should have the

goal and expectation that all students will be educated to become productive citizens and achieve a pleasing quality of life. From a practical view, communities should support schools' improvement initiatives because an educated workforce is vital to business and industry. Additionally, with an educated work force come higher salaries, which boost the local economy.

The future of Georgia's economic viability requires a quality education for its children, beginning with first-rate early learning experiences, academic excellence

throughout school, and a solid preparation for postsecondary education and the workforce. Georgia cannot afford to lose a single student in the educational pipeline. The support of local communities is needed in order to keep every student on the path of high school completion. Nationally, thousands of students are lost in the educational pipeline, failing to complete high school or pursue higher education. Figure 27 gives a projection of the decrease in the number of students enrolling in first grade and the number that actually graduates from high school

Figure 27. Educational Pipeline: Grade 1 Through Bachelor's



The increase in the number of students from grades 8 to 9 in the figure is a consequence of what Haney, W., Madaus, G., Abrams, L., Wheelock, A., Miao, J., and Gruia, I. (2004) determine is the result of students having to repeat grade 9. In Georgia, there were 19 percent more students in grade 9 during 2000-2001 than in grade 8 during 1999-2000.

Source: College Board. "Coming to Our Senses: Education and the American Future." December 2008.

and college. The projection shows how dramatically the student population in high school and postsecondary institutions drops over time. This representation, however, need not represent Georgia's future. The talented and dedicated leadership in Georgia's communities have the tools to plug every leak in the educational pipeline.

Many of Georgia's localities have already begun the work of community planning for school improvement. Some have formalized their support for school improvement by creating, implementing, and evaluating a community plan to support school improvement. These plans focus on what the community can do – not just what schools should do – to increase student learning.

Across the many regions of the state, the process and outcomes of community planning for school improvement will vary. Each region in Georgia has its own characteristics, history of support for public education, and current structures for community involvement, all of which will shape the local plan. Yet local community and business leaders can draw on the experiences of other regions that have successfully implemented an action plan and made a positive difference in their educational system.

The Georgia Partnership for Excellence in Education supports the three-step strategy to realize a region's full potential outlined by the Southern Growth Policies Board: *convene-connect-commit*.⁶¹ Effective community planning begins with an area's existing resources. To gain momentum for school improvement initiatives in your region, bring together stakeholders and build partnerships with current organizations that support local, sustainable best practices, such as the Georgia Partnership for Excellence in Education, Communities in Schools, Family Connection Partnership, Junior Achievement, and more. Measurable and sustained success can be achieved through the lasting, collaborative commitment of the individuals, businesses, and institutions in your community.

Interested in Developing a Community Action Plan to Support School Improvement Initiatives?

The Georgia Partnership for Excellence in Education seeks to encourage and assist communities as they develop and implement plans to support their schools' improvement efforts. Visit the Partnership's website (www.gpee.org) to obtain a copy of the document, *The "How To's" of Community Planning*, to see a sample community plan, and to acquire

additional details about developing a community plan. Call the Georgia Partnership's office for information on how we can help facilitate the process of community planning for school improvement in your area.

In spite of the academic growth shown by such indicators as increased graduation rates, improvements on the NAEP, and greater success with Advanced Placement courses, Georgia still has many hurdles to overcome in creating equitable educational outcomes for every child. The support of local communities is needed in order to improve the well-being and economic security of young children; the quality of children's early learning opportunities; academic achievement at all grade levels; and preparation for work or post-secondary education. The challenge to graduate every student from high school cannot rest on the shoulders of educators alone. As demonstrated throughout this text, the personal and economic consequences of failing to graduate from high school are too costly. The future of Georgia's youth and the future viability of the state compels all stakeholders – educators, policy makers, and business leaders – to invest in quality education for every student.

⁶¹ Georgia Work Ready Initiative Fact Sheet, November 2008. Retrieved from <http://www.gaworkready.org>.

For More Information and Support

The following organizations and their websites provide information that support the key issues outlined in this document.

The Georgia Partnership for Excellence in Education - www.gpee.org

The Partnership provides advocacy, policy, and communications support to business, government, and education leaders to raise academic standards and results in Georgia's public schools.

The Georgia Chamber of Commerce - www.gachamber.com

The Georgia Chamber of Commerce promotes education as one of the resources necessary to keep the business community of the state of Georgia economically prosperous.

Georgia Department of Education - www.gadoe.org

The Georgia Department of Education offers information on public school policies, operations, curricula, calendars, and contact information. This resource also provides details on testing, exceptional students, classroom instruction, technical career education and more.

Georgia Family Connection Partnership - www.gafcp.org

The Georgia Family Connection Partnership tracks critical information especially relevant to the influences of early life experiences on education. Through the KIDS COUNT publication, this organization provides comprehensive reports listing, by county, numerous indicators related to children's well-being.

Georgia Leadership Institute for School Improvement - www.glisi.org

Georgia Leadership Institute for School Improvement (GLISI) is a partnership devoted to the success of Georgia's educational leaders. GLISI focuses on leadership development, policy influence, and research and analysis to support and equip educational leaders to drive change for student success.

Governor's Office of Student Achievement - www.gaosa.org

The governor's office provides the latest information to support student achievement at every grade. The information includes annual accountability report cards on K-12 Public Schools with Criterion-Referenced Competency Tests (CRCT) results.

Georgia School Council Institute - www.georgiaeducation.org

The Georgia School Council provides current information on school performance with comparisons available by region, system, and state. In addition to giving the latest in test scores, the council provides information on education issues and news.

Voices for Georgia's Children - www.georgiavoices.org

This organization provides research to government, business, and community leaders on how to improve the well-being of Georgia's children. Their policy agenda seeks to create change in child mental, physical, and oral health, reduce child abuse and neglect, improve elementary school reading achievement, and reduce juvenile detention rates and school dropout rates.

Communities in Schools - www.cisga.org

Communities in Schools (CIS) assists educators and social service providers in creating a learner-centered environment through training, individual consultation, and technical assistance provided by field facilitators.

Junior Achievement - www.ja.org and www.georgia.ja.org

In partnership with businesses and educators, and with the help of volunteer tutors, Junior Achievement uses hands-on, experiential programs to educate K-12 students about entrepreneurship, work readiness, and financial literacy.

Georgia Professional Standards Commission - www.gapsc.com

The Commission is responsible for the certification, preparation and conduct of personnel in Georgia's public schools.

Bright from the Start: Georgia Department of Early Care and Learning - www.dec.state.ga.us

This organization is responsible for the childcare and early education needs of Georgia's Pre-K program, licensing and monitoring child-care facilities, and administering federal dollars to a variety of programs servicing young children.

Board of Regents of the University System of Georgia - www.usg.edu/regents

The Board of Regents oversees 35 colleges and universities in the state. The governor-appointed board seeks to contribute to Georgia's advancement by providing excellent college programs and pursuing and disseminating research.

Technical College System of Georgia - www.tcsge.edu

The Technical College System oversees the state's technical colleges and several other programs. The system offers certificates, diplomas, and Associate's degree programs, continuing education, and economic development.

Georgia Student Finance Commission - www.gsfc.org

This commission helps Georgia students locate financial aid for college. In addition to administering scholarships and grants such as HOPE (Helping Outstanding Pupils Educationally), the commission offers student loans and free financial aid consultation. The commission also developed GCollege411 – an online resource that aids in the college application process.

Georgia Work Ready - www.gaworkready.org

A partnership between the state government and the Georgia Chamber of Commerce, Georgia Work Ready facilitates pairing employers with qualified workers. This site provides additional information on the initiative and its plans for promoting economic growth in the state of Georgia.



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