



The Economics of Education

FOURTH EDITION



Shift



GEORGIA PARTNERSHIP
FOR EXCELLENCE IN EDUCATION





GEORGIA PARTNERSHIP FOR EXCELLENCE IN EDUCATION

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AUGUST 2013

This is the fourth edition of the *Economics of Education* report that was first printed in 2004 and repeated in 2006 and 2010.

Earlier editions are available for review and download at the Georgia Partnership web site, www.gpee.org.

AUTHOR

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OUR MISSION

Inform and influence Georgia leaders through research and non-partisan advocacy to impact education policies and practices for the improvement of student achievement.

Special thanks to the Georgia Chamber of Commerce and Lockheed Martin for their support of this publication.

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The Georgia Partnership for Excellence in Education observed and celebrated its 20th anniversary in 2012.

We have entered our next 20 years running. The Partnership team is excited by and embraces the many public education challenges that await. Many of you reading this fourth edition of the *Economics of Education* no doubt know our work well but to those who may not be as knowledgeable, we invite you to get to know us better.

Today, the Georgia Partnership is engaged on several fronts improving our state's public education system.

This fourth edition is a perfect example. Since we first partnered with the Georgia Chamber of Commerce in 2004, we have literally visited every corner of the state informing audiences of the inextricable link between education and economics. Our **Education Policy Fellowship Program (EPFP)** since 2008 has been creating leaders who better understand the intricacies of the decision process and the impact of those decisions. The **Policy Toolbox** is a unique resource that immediately places a wealth of information literally at the fingertips of anyone across our state.

Our signature publication, the *Top Ten Issues to Watch* report, has become a key policy resource for Georgia leaders since it was introduced in 2005.

It is formally unveiled at our January **Media Symposium** that provides education reporters and editors an inside look at the topics sure to grab the headlines in the new year. The Symposium was launched in 2006.

Since its inception in 1993, the Georgia Partnership has been informing audiences using a variety of methods.

The **Critical Issues Forums** held periodically during the year address key topics and are presented by national and state education leaders alike. The election year **Policy Forums**, which we have presented since 2002, find us partnering with the Georgia School Boards Assn. to present an "Education 101" primer for local school board and state legislative candidates.

The *Annual Bus Trip Across Georgia* is a unique event that takes influencers on a tour of some of the state's best schools and education programs.

This program began in 1993 and has been held annually since. Participants both praise the stops for outstanding achievement and then capture what they have experienced to take back home to their own schools and communities. There's more, much more...business community support, research and policy analysis, community engagement programs, collaborations and partnerships, just to name a few.

The Georgia Partnership for Excellence in Education's greatest strength is that it creates the conditions that stimulate critical change.

Visit our web site at www.gpee.org or click on the QR code. When you are on our site, check our 20th anniversary section for a better idea of the impact we have had through the years. For up-to-date news and information follow us on Twitter and Facebook and join our mailing list. We welcome your support and participation in our work.



Fellow Georgians,

Welcome to the fourth edition of the *Economics of Education*. This publication examines the signature message of the Georgia Partnership for Excellence in Education: education is economic development.

In early 2004, the Georgia Partnership and the Georgia Chamber of Commerce combined efforts for the inaugural edition to build awareness of the key education issues related to building a robust economic climate. Now, nine years later, the message that education is economics has become even more critical. This update tells both that story and empowers individuals and businesses to get involved by identifying a variety of specific ways in which they can make an impact in education.

Our workforce development pipeline is threatened by what could be considered a perfect storm. As it emerges from the recent economic downturn, Georgia has invested in a diversified economy that includes trade and transportation, a growing high-tech sector, and natural resources. Due partially to this combination, Georgia is predicted to add 1.5 million new jobs by 2020. Of those new jobs, nearly 60 percent will require some sort of education after high school. Currently, only about 42 percent of Georgia's adult population has education beyond that level. Frankly, the skill level of Georgia's workforce today does not meet the growing needs of a successful economic development plan. It must if we are to prosper.

Our education system is also facing changes and stresses. Our K-12 system is undergoing a variety of reforms including increased rigor, standards, assessments and accountability aimed at improving the college and career readiness of our students. Changing demographics are presenting unique challenges as we see expanding populations of students who traditionally are less likely to graduate from high school such as low-income students and English language-learners. These students are also underrepresented in the science, technology, engineering, and math (STEM) fields and other highly technical fields that are the basis for Georgia's growing economy.

These challenges could sink our best economic development plans. However, if the educational system is strong and supports all children, these forces – changing workforce demands, increasing academic rigor, changing demographics – could work in our favor to create a trifecta of opportunity that supports a citizenry and workforce that is richly diverse, creative, qualified and meets Georgia's needs.

We invite you now to read the following pages. They are designed both to inform and encourage action. A vigorous and vibrant public education system is essential to our economic success. Opportunity and prosperity are our goals. Join us as we work to make Georgia a national leader.



Steve Dolinger

*President, Georgia Partnership for
Excellence in Education*



Chris Clark

President and CEO, Georgia Chamber of Commerce

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

The South is a decade behind the rest of the country in the proportion of high-wage, high-skill, high-demand jobs that require postsecondary education.

There is a crisis in the South that threatens the region's economic viability and competitiveness. According to a recent study conducted by Georgetown University, many parts of the South (including Georgia) are trapped in an economic cycle known as the low-wage/low-skill equilibrium.¹ Under this equilibrium, high-skill, high-wage industry lacks the incentive to locate in the region, and incentives for workers to pursue postsecondary education and training are weakened. To break this cycle, the region needs an aggressive strategy that mixes educational improvements with economic development.

In 2010, over half of all Georgians worked in either sales and office support or blue-collar occupations.

The projected growth by 2020 in these occupations remains below average – 12 percent for blue-collar jobs and 18 percent for sales occupations. As the state moves out of the recession that began in 2007, these jobs, especially the low-skilled blue-collar jobs, are not forecasted to rebound to prerecession levels. In contrast, occupations that require some training beyond a high school diploma – such as those in the healthcare industry, which comprise only 6.5 percent of the current workforce – are expected to grow by nearly 30 percent during that same time period.

To compensate for the decline in low-skill blue-collar jobs, Georgia has invested in an economic development plan based on a diversified economy that includes trade and transportation, a growing high-tech sector, and natural resources. Due partially to this combination, Georgia is predicted to add 1.5 million new jobs by 2020. Of those new jobs, nearly 60 percent will require some sort of education beyond high school.² Currently, only about 42 percent of Georgia's adult population has education beyond the high school level. The skill level of Georgia's workforce does not meet the growing needs of a successful economic development plan.

“The best economic stimulus package is a high school diploma.”

GOVERNOR BOB WISE
PRESIDENT, ALLIANCE
FOR EXCELLENT EDUCATION
JANUARY 2010

These challenges are made more acute by changes in our educational system. The current K-12 system is embarking on a series of reforms to improve the college and career readiness of students when they graduate from high school. These reforms include increased rigor, standards, assessments, and accountability. At the same time, Georgia's K-12 population is shifting and experiencing an unprecedented growth among students who traditionally are less likely to graduate from high school such as low-income students and English language learners. These students are also underrepresented in the science, technology, engineering, and math (STEM) fields and other highly technical fields that are the basis for Georgia's growing economy.

A strong educational system is a necessary component to support the state's economic vision. The convergence of the following three trends has the potential to be a perfect storm with the power to sink the workforce development pipeline in Georgia: 1) increased academic rigor, 2) changing demographics, and 3) changing workforce demands. However, if the educational system is strong and supports all children, these forces could be a trifecta of opportunity that ensures the development of a workforce that is richly diverse, creative, and meets the needs of Georgia's economic development plans.

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

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 can be felt through the loss of personal income, which, in turn, lowers a region's lower per capita income. Other

¹ Carnevale, A.P. and Smith, N. *A Decade Behind: Breaking Out of the Low-Skill Trap in the Southern Economy*. Washington, DC: Georgetown University, Center on Education and the Workforce. 2012.

² Ibid.

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 2012 high school graduation rate was 69.7 percent, which continues the trend of annual increases in this critical indicator.³

Despite the rise in graduation rates in recent years, Georgia still lags behind other states in the percentage of high school students earning a diploma. The most recent national comparison data from the U.S. Department of Education show that Georgia ranked 45th out of 48 states reporting high school graduation rates.⁴ How can Georgia successfully compete in the global economy if its graduation rate is below that of over 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 STEM fields.

Impact of High School Noncompletion 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 postsecondary 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 graduates, 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.⁵

FIGURE 1: PUBLIC HIGH SCHOOL GRADUATION RATES IN GEORGIA, 2009–2012



Source: Georgia Department of Education State Report Cards.

* 2009 and 2010 are approximations from the Georgia Department of Education.

FIGURE 2: EDUCATIONAL ATTAINMENT AND EMPLOYMENT IN THE UNITED STATES

| Unemployment Rate | May 2013 | Median Weekly Earnings (& approx. annual) |
|-------------------|---------------------------------|---|
| 15% 10% 5% 0% | | \$0 \$200 \$600 \$1000 |
| 3.6 | Bachelor's Degree & Higher | \$1,189 (\$61,828) |
| 6.3 | Some college/Associate's Degree | \$741 (\$38,532) |
| 6.9 | HS Graduates, No College | \$651 (\$33,852) |
| 10.3 | Less than a High School Diploma | \$457 (\$23,764) |

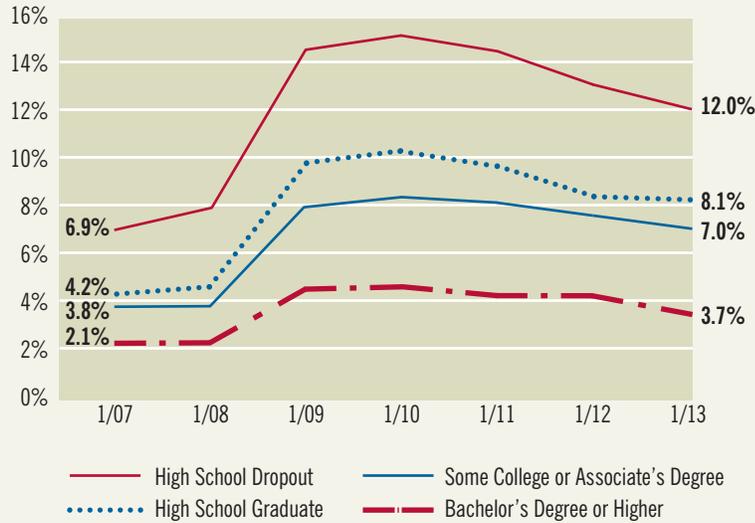
Source: U.S. Bureau of Labor Statistics. Earnings and unemployment are for full-time workers age 25 and older, not seasonally adjusted.

³ Georgia Department of Education. "2011-2012 State Report Card." Retrieved from <http://www.doe.k12.ga.us>

⁴ U.S. Department of Education. "Regulatory Cohort Graduate Rate – All Students 2010-11 By State." 2012. Retrieved from Ed Data Express: <http://www.eddataexpress.ed.gov/>

⁵ 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 3: UNEMPLOYMENT RATES BY EDUCATION LEVEL 2007–2013



Source: U.S. Bureau of Labor Statistics, January 2013.

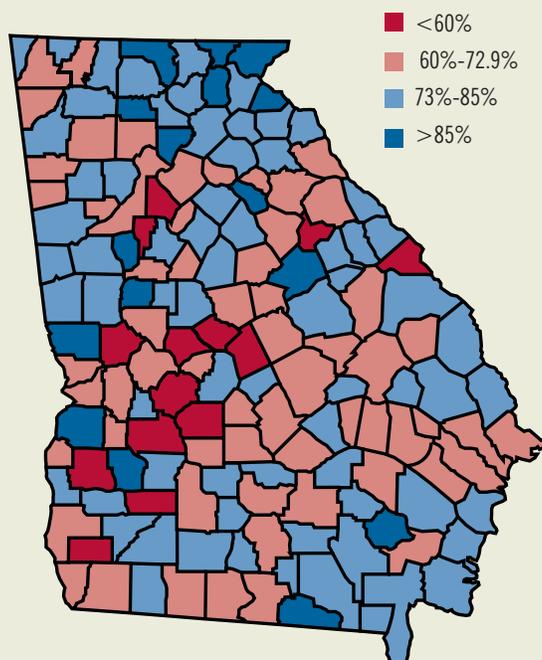
Additionally, unemployment trends clearly indicate that the recent economic recession has impacted high school dropouts more severely than any other population, as revealed in figure 3.

The correlations between education levels and employment rates can be seen and felt clearly in local communities. In Georgia, many counties with high graduation rates also tend to have lower rates of unemployment, a fact illustrated in the maps shown in figures 4 and 5. If Georgia's local and state leaders hope to lessen the rate of unemployment in these communities, it is imperative to enact policies and supports to ensure more students graduate from high school.

Communities that increase the educational levels of their residents become more attractive to businesses searching for an area in which to locate that has 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 revenue.

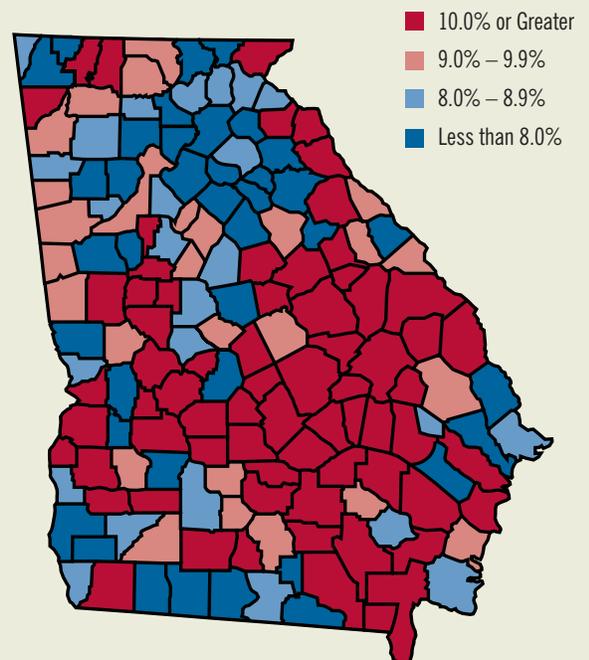
Figure 6 quantifies potential revenue enhancements gained from completing high school; the chart depicts the earning potential for an individual based on the level of educational attainment and the amount of taxes paid by that individual. Compared to high school dropouts, individuals who earn a high school

FIGURE 4: HIGH SCHOOL GRADUATION RATE BY COUNTY, 2012



Source: Georgia Department of Education, State Report Cards.
Note: Taliaferro and Quitman counties are based on 2011 graduation rates.

FIGURE 5: UNEMPLOYMENT RATES BY COUNTY, MAY 2013



Source: Georgia Department of Labor, May 2013. In May 2013, the average unemployment rate in Georgia was 8.3 percent and the national average was 7.6 percent.

diploma increase their income potential by more than 30 percent and contribute 43 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.

Approximately 61,000 students in the Class of 2010 dropped out of high school in Georgia. If even half of those students had graduated from high school, the economic benefits would have been huge. With an additional 30,000 high school graduates, the benefits to the state would be:

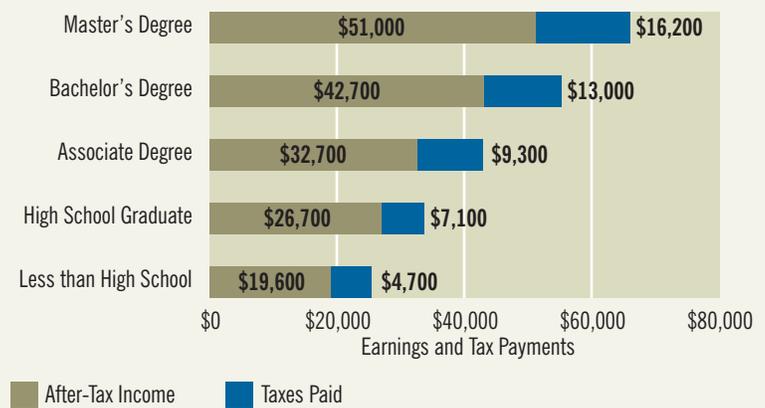
- \$242 million in increased earnings
- \$191 million in increased spending
- \$475 million in increased home sales
- \$350 million in increased gross state product.⁶

This additional spending and investment would potentially support 2,650 new jobs and increase the gross state product of Georgia by up to \$350 million with an additional \$18 million in increased state tax revenue.⁷ Imagine the potential impact on local businesses that rely on discretionary spending, as well as the housing and automobile industry, if these results were multiplied throughout Georgia.

Impact of High School Noncompletion 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

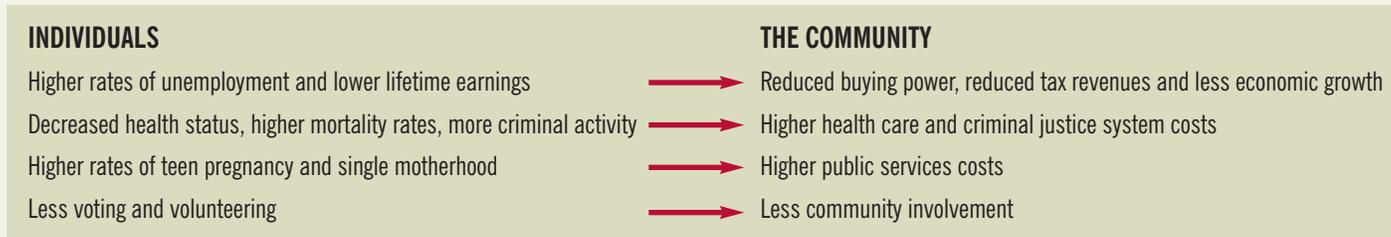
FIGURE 6: MEDIAN EARNINGS AND TAX PAYMENTS BY EDUCATION LEVEL, 2008



Source: Baum, S. and Ma, J. *Education Pays: The Benefits of Higher Education for Individuals and Society*. College Board. 2012. 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.

school has both private and public consequences: individuals’ personal incomes are lower, which results in lower tax collections to finance public services.⁸ 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 for 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.

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. 2007.

⁶ Alliance for Excellent Education. “The Economic Benefits of Helping High School Dropouts.” December 2012. Retrieved from: www.all4ed.org/econ.

⁷ Ibid.

⁸ 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. 2007.

Research has estimated that over their lifetime, each youth age 16–24 who is not in school or actively engaged in the workforce imposes, on average and compared to other youths either in school or working, a taxpayer burden of \$215,580 to cover costs such as lost tax payments, criminal justice expenses, public health expenditures and welfare payments. The total social burden is \$596,640 per youth. The social burden covers costs such as lost earnings, costs associated with being a victim of a crime, and increased health costs due to uninsured patients. Across the estimated 3.3 million youths not in school or working, the total fiscal loss is \$707 billion (in 2011 dollars), and the total social loss is \$1.96 trillion.⁹

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:

Each new high school graduate would yield a public benefit of \$209,000 in higher government revenues and lower government spending for an overall investment of \$82,000, divided between the costs of powerful educational interventions and additional years of school attendance leading to graduation. The net economic benefit to the public purse is therefore \$127,000 per student and the benefits are 2.5 times greater than the costs.¹⁰

Moving Forward: Improving Lives, Communities and Economies

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

- 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 youths to successfully transition from high school to work or postsecondary education.

Progress on all three of these key issues will ensure that Georgia's students graduate from high school on time, prepared to enter postsecondary 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.

⁹ Belfield, C., Levin, H., and Rosen, R. *The Economic Value of Opportunity Youth*. Center for Benefit-Cost Studies of Education at Teachers College. 2012.

¹⁰ 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. 2007.

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 *2013 KIDS COUNT Data Book*, Georgia has an overall rank of 43 among all 50 states on 16 measures of child and family well-being.¹¹ 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. The following factors collectively impact success in school: health factors, including birth weight, neonatal health and the health of the mother; poverty indicators such as the mother's education level and family employment and income; and early learning opportunities for development and increased skills. 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.¹² Such instability in a child's first years of life will often have negative consequences on his or her future academic success. These types of instabilities and needs in a child's life can lead to stress. Extensive research on the biology of stress now shows that healthy development can be derailed by excessive or prolonged activation of stress response systems in the body.¹³ According to the Center on the Developing Child at Harvard University:

Toxic stress response can occur when a child experiences strong, frequent, and/or prolonged adversity – such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence, and/or the accumulated burdens of family economic hardship – without adequate adult support. This kind of prolonged activation of the stress response systems can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years.¹⁴

When toxic stress response occurs continually, or is triggered by multiple sources, it can have a cumulative toll on an individual's physical and mental health – for a lifetime. The more adverse experiences

“...there are some policies that both are fair – i.e., promote equity – and promote economic efficiency. Investing in the early years of disadvantaged children's lives is one such policy.”

“Parents need help and their children will suffer if they don't get it. Society will pay the price in higher social costs and declining economic fortunes.”

JAMES J. HECKMAN, “*THE ECONOMICS OF INEQUALITY: THE VALUE OF EARLY EDUCATION*” 2011

¹¹ Annie E. Casey Foundation. *2013 KIDS COUNT Data Book*.

¹² 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.

¹³ Center on the Developing Child – Harvard University. “Toxic Stress: The Facts.” 2012. Retrieved from

http://developingchild.harvard.edu/topics/science_of_early_childhood/toxic_stress_response/

¹⁴ Ibid.

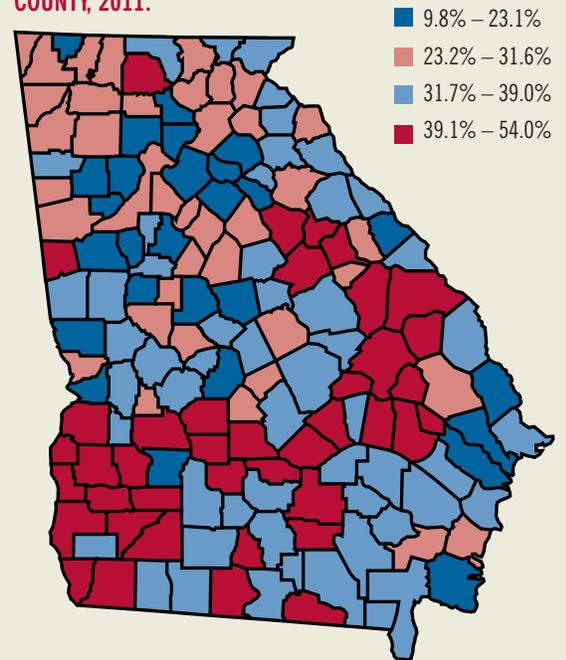
in childhood, the greater the likelihood of developmental delays and later health problems, including heart disease, diabetes, substance abuse and depression. Research also indicates that supportive, responsive relationships with caring adults as early in life as possible can prevent or reverse the damaging effects of toxic stress response.¹⁵ For this reason, ensuring a healthy and secure start in life for all children is an imperative and valuable economic investment.

One source of instability and cause of stress is income. 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 2011:

- 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 26.6 percent.¹⁶ In many counties, however, the child poverty rate was over 50 percent, as illustrated in figure 8.
- For children under the age of six, 45 percent lived in low-income families.¹⁷
- In Georgia's public schools, 57 percent of students were eligible under federal guidelines to receive free or reduced price school meals.¹⁸
- Georgia's high school graduation rate for economically disadvantaged students was 59 percent. For non-economically disadvantaged students, the rate was 75 percent.¹⁹

Education is the key to breaking the cycle of poverty, as children whose parents have lower levels of education are more likely to live in poverty. Data

FIGURE 8: CHILDREN LIVING IN POVERTY IN GEORGIA BY COUNTY, 2011.



Source: Family Connection Partnership. KIDS COUNT Data Center. Retrieved from www.kidscount.org/datacenter Note: In 2011, the federal poverty level for a family of four was \$23,050. "Low-income" refers to households with income below 200 percent of the poverty threshold.

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).

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 they need to learn at high levels.

Disparities in child development outcomes based on family income are evident as early as nine- months

¹⁵ Ibid.

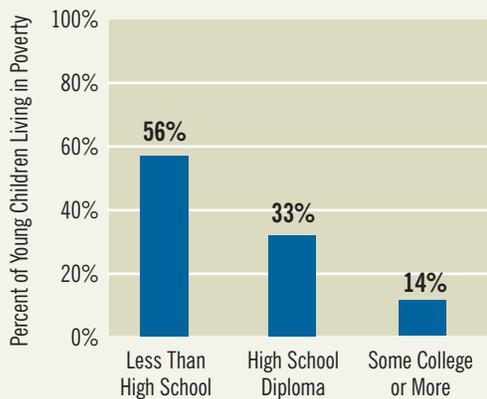
¹⁶ Annie E. Casey Foundation. *2012 KIDS COUNT Data Book*.

¹⁷ National Center for Children in Poverty. "Georgia: Demographics of Low-Income Children." May 20, 2013. Retrieved from http://nccp.org/profiles/GA_profile_6.html

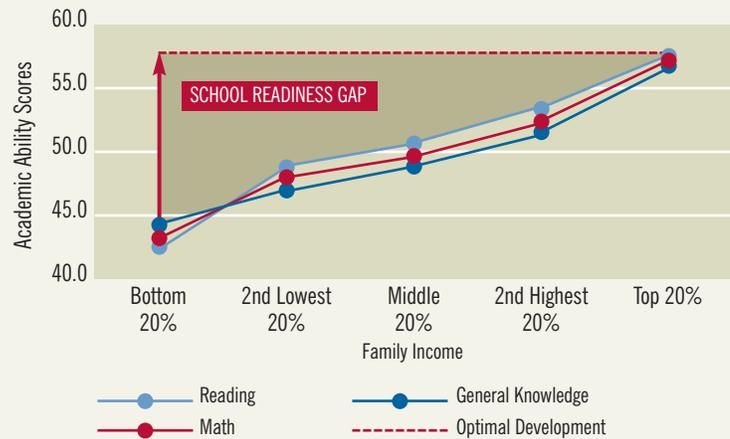
¹⁸ Governor's Office of Student Achievement. "2010-2011 State Report Card."

¹⁹ Ibid.

²⁰ Halle, T., Forry, N., Hair, E., Perper, K., Wandner, L., Wessel, J., and Vick, J. Disparities in Early Learning and Development: Lessons from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B). Child Trends and The Council of Chief State School Officers. June 2009.

FIGURE 9: RATE OF CHILD POVERTY BY PARENTAL EDUCATION IN GEORGIA, 2010.

Source: National Center for Children in Poverty. "Georgia Demographics of Young, Poor Children." 2012.

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.

old and grow larger by 24 months.²⁰ 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.²¹ At age four, children who live below the poverty line are 18 months below what is developmentally 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.²²

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.²³

Healthy Beginnings for Children

Healthy children become healthy students. The availability, quality and cost of health care influence child development and school readiness.²⁴ 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 noncompletion of high school.

Early and 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.²⁵ One study found that 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.²⁶

On its 2012 pre-term birth report, the March of Dimes gave Georgia a D grade for its high number of pre-term births.²⁷

- The rate of late pre-term births in Georgia is 9.3 percent.

21 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.

22 Ibid.

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

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

25 Ibid; Rose, S.A. et al. "Pathways from Prematurity and Infant Abilities to Later Cognition." *Child Development*, 76(6):1172. 2005.

26 Breslau, N., Paneth, N.S., and Lucia, V.C. "The Lingering Academic Deficits of Low Birth Weight Children." *Pediatrics*, 114(4): 1035. 2004.

27 March of Dimes. "2012 Preterm Birth Report Card." Retrieved from <http://www.marchofdimes.com/mapflashfilespad/reportcards/2012/english/GA.pdf>

- Among uninsured women in Georgia, the rate of late pre-term births is 27 percent.
- Pre-term births cost the U.S. more than \$26 billion annually.²⁸

Another important support for children's health is access to adequate health care and health insurance. 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.²⁹

In 2010, 10 percent of Georgia's children under the age of six did not have health insurance.³⁰ The full implementation of the Affordable Care Act (ACA) is projected to lead to further increases in medical coverage for children, especially low-income children. However, some states – including Georgia – have said they will not implement the Medicaid expansion, while other states may not be aggressive in their ACA outreach and enrollment efforts. Finally, the future of medical insurance programs for low-income children (Medicaid and PeachCare) in general is uncertain beyond 2015, and federal budget issues have led to some calls for block grants in Medicaid.³¹ With the full roll-out of the ACA, state and federal policy changes will have a significant impact on children's enrollment in health insurance programs. These impacts will be felt by all children, but especially black and Hispanic children who rely heavily on Medicaid and PeachCare coverage.

Quality Early Learning Opportunities

Whether or not children will be successful students depends largely on the quality of their early learning experiences. Research demonstrates the importance

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

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.

Parental Engagement

Parents remain the best and most consistent source of rich early learning experiences. Parents can stimulate their children's early learning by exposing them to educational games, media, and the arts and by engaging their children in everyday conversations. 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.³² 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.)

- Children living in poverty are less likely to be read to daily than their peers in non-poor households.³³
- Children of lower income families enter school with smaller vocabularies than children of the same age in professional families.³⁴
- To borrow the words of researchers at the Economic Policy Institute, "The inequalities of children's cognitive ability are substantial right from 'the starting gate.'"³⁵

²⁸ Ibid.

²⁹ KIDS COUNT. "State Level Data Online." Retrieved from <http://www.kidscount.org/sld/compare.jsp>

³⁰ Ibid.

³¹ Ibid.

³² Rhode Island KIDS COUNT. "Getting Ready: Findings from the National School Readiness Indicators Initiative: A 17 State Partnership." February 2005.

³³ Forum on Child and Family Statistics. "America's Children: Key National Indicators of Well-Being, 2007." Retrieved from www.childstats.gov

³⁴ Hart, B. and Risley, T.R. "The Early Catastrophe: The 30 Million Word Gap by Age 3." *American Educator*. Spring 2003. Retrieved from http://www.aft.org/pubs-reports/american_educator/spring2003/catastrophe.html

³⁵ 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.

READ TO ME! AMONG AMERICAN 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 | 50.0% |
| In families 100-199% above poverty | 59.5% |
| In families 200% above poverty | 65.0% |

Data for 2005. Source: 2006 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 | 41.3% |
| High school diploma..... | 55.2% |
| Some college | 59.8% |
| Bachelor's degree or higher | 72.4% |

Data for 2005. Source: 2006 Federal Interagency Forum on Child and Family Statistics.

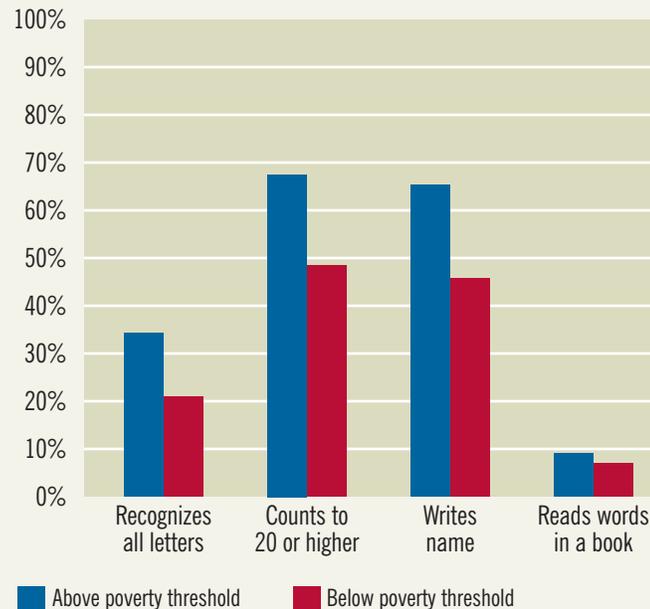
- By the age of three, children from low-income families have heard 30 million fewer words than their middle-income peers.³⁶

High-Quality Early Learning Programs

Fortunately, high-quality early education programs can benefit children at risk and help close the early achievement gap for disadvantaged students. Early learning programs are a source of rich learning opportunities and help to promote school readiness for children in their preschool years. Such programs have numerous positive effects, both immediate and long term, including the following:

- improved language, listening, word analysis, vocabulary and math skills;

FIGURE 11: PERCENTAGE OF CHILDREN AGES 3–6 WITH SELECTED SCHOOL READINESS SKILLS, BY POVERTY STATUS



Source: O'Donnell, K. "Parents' Reports of the School Readiness of Young Children from the National Household Education Surveys Program. Table 2." National Center for Education Statistics. 2008. Retrieved from www.childtrendsdata.org

- higher reading and math achievement from 6 to 15 years of age;
- lower rates of grade retention and special education placement;
- decreased likelihood of dropping out of school; and
- decreased likelihood of involvement in the juvenile justice system.³⁷

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

36 Hart, B. and Risley, T.R. "The Early Catastrophe: The 30 Million Word Gap by Age 3." American Educator. Spring 2003. Retrieved from http://www.aft.org/pubs-reports/american_educator/spring2003/catastrophe.html

37 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>

grade, one-third of the achievement gap is closed as a result of preschool education.³⁸

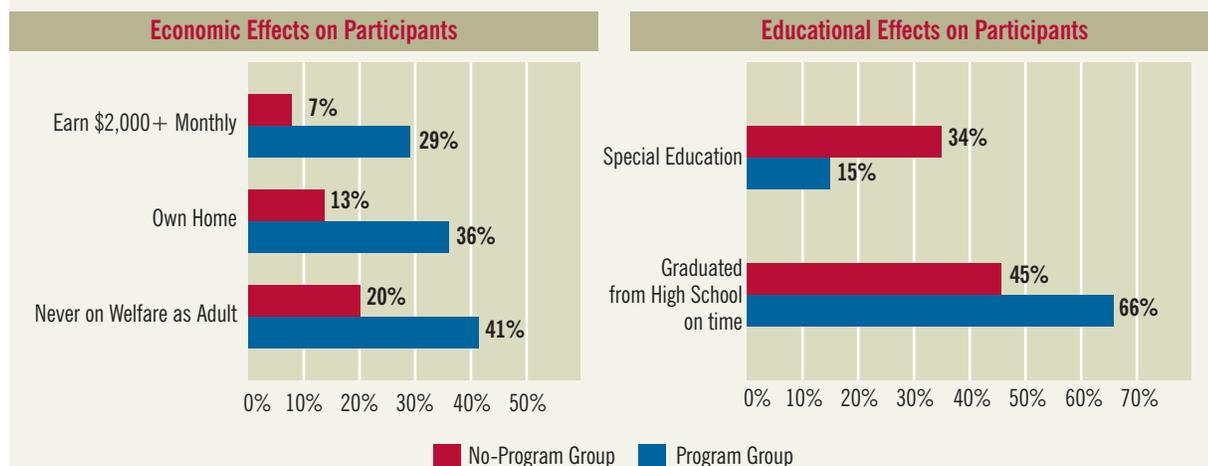
A well-known longitudinal research study of the Perry Preschool program further substantiates the gains from a quality preschool education. The study compares the results of 123 African American children born into poverty. As depicted in figure 12, those individuals who participated in the preschool 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 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 40 years.

Georgia's commitment to increasing access to quality early learning programs 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 five. In fact, by age three roughly 85 percent of the brain's core structure will be 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 (figure 14).
- Economic studies suggest that investments in quality childcare and education for children in their preschool years provide a return of 14 to 15 percent.³⁹ By comparison, an investment in the stock market yields a return of merely 3-4 percent over the long term.

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

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 Press, 2005.

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

39 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 Press, 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.

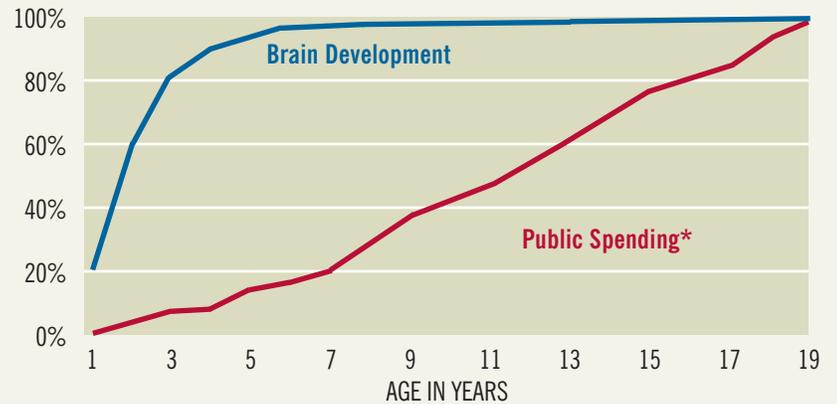
caused by poor-quality childcare costs American businesses more than \$3 billion a year. In addition, early educational programs for Georgia's children are a building block for an educated workforce in our state.

Georgia has long had a commitment to early learning. It was the first state in the nation to establish a state-level department responsible for early learning – Bright From the Start: Georgia Department of Early Care and Learning (DECAL). DECAL administers Georgia's state-funded Pre-K Program, licenses childcare centers and home-based childcare, administers federal nutrition programs, and manages voluntary quality enhancement programs.

Georgia has received national attention for its exemplary state-funded pre-kindergarten program. According to the National Institute for Early Education Research (NIEER), 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 2011-2012 school year, Georgia ranked sixth in the country for its rate of access to pre-kindergarten for four-year olds.⁴⁰

DECAL is taking steps aimed at maintaining and improving quality and increasing statewide accessibility, especially among Georgia's low-income population. One key initiative is Quality Rated, a tiered quality rating and improvement system (QRIS). A QRIS provides early childhood programs incentives and resources to improve quality while working

FIGURE 14: PUBLIC SPENDING AND BRAIN DEVELOPMENT: THE DISCONNECT



*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." 2008.

through several manageable steps – or levels. At the same time, the centers receive public recognition for their efforts to achieve high quality.

Quality Rated was launched in Georgia in January 2012. It uses one, two and three stars to indicate programs that meet defined program standards beyond Georgia's minimum licensing requirements. The program is voluntary for all childcare centers. Participating programs become eligible for free professional development, technical assistance and financial incentive packages supported by foundations and businesses.⁴¹

40 National Institute for Early Education Research. "The State of Preschool 2012: State Preschool Yearbook." 2012.

41 Bright From the Start: Georgia Department of Early Care and Learning. "Georgia's New 'Quality Rated' Program Marks Another Milestone." Press release. Atlanta, GA. October 22, 2012.

Ways to Make a Difference in Early Life Experiences

Look up, analyze and share data about the status and well-being of children in your county or region. Visit the websites of organizations such as the Family Connection Partnership, Voices for Georgia's Children and the Georgia Early Education Alliance for Ready Students (GEEARS) to access current data and information. The GEEARS Blueprint page uses software to illustrate multiple readiness indicators. Users of the Blueprint are able to review data for each of Georgia's 159 counties and make direct connections to community assets and the needs of children living in that county.

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, and television 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, the importance of high school graduation, and workforce development. Use local indicators of success including children's health, school readiness and school success measures.

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.

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

Focus the community on the necessity of sufficient resources for high-quality childcare and support center participation in Quality Rated. Provide or subsidize childcare for your workforce. Work with government leaders to design childcare programs that also support the business community. Work within your community to have your local provider participate in Quality Rated.

Reinforce in the workplace that parents are their children'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. To have a successful school career, students must be able to read and calculate on grade level each year.

The achievement gap not only hinders individuals in their future careers and livelihood, but it also influences national productivity and global competitiveness. Additionally, there are distinct achievement gaps that must be addressed. Gaps exist between 1) the United States and other nations, 2) Hispanic/Latino and black students and white students, 3) different income levels and 4) similar students that are schooled in different systems, states or regions within the United States.⁴²

The narrowing gap between similar students in some schools across the country shows that there are opportunities to close these achievement gaps. Many states and school systems are producing very high outcomes for poor and minority students. However, the success of students between states varies and shows there is much work to be done.

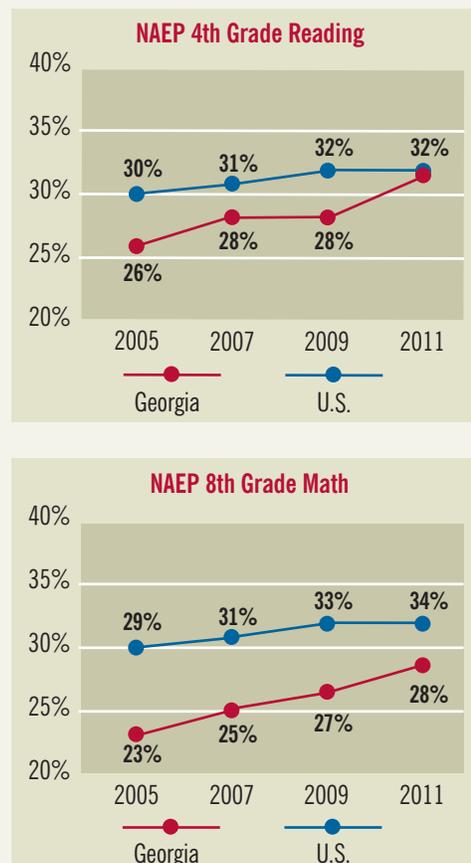
Georgia's Student Achievement on a National Scale

Traditionally, 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) is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas.⁴³ The NAEP, also known as "the Nation's Report Card," enables a comparison of Georgia's students with the rest of the nation and provides a reliable measure of their academic progress over time. 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.⁴⁴ Thus, the NAEP is a critical indicator of how well we are preparing

Georgia's students to be academically competitive with their peers across the country.

In recent years, Georgia has made some progress toward improving student outcomes, as evidenced by the NAEP results. In fourth grade reading, Georgia has closed the gap between the state and the national average. In mathematics, however, Georgia has

FIGURE 15: FOURTH GRADE READING AND EIGHTH GRADE MATH NAEP SCORES IN GEORGIA AND IN THE U.S.: 2005–2011



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

⁴² McKinsey & Company. *The Economic Impact of the Achievement Gap in America's Schools*. April 2009. Retrieved from www.mckinsey.com/clientservice/socialsector

⁴³ NAEP and results from the Criterion-Referenced Competency Tests (CRCT) indicate student achievement at a point in time. They also assess different students each year. They do not indicate individual students' progress over time.

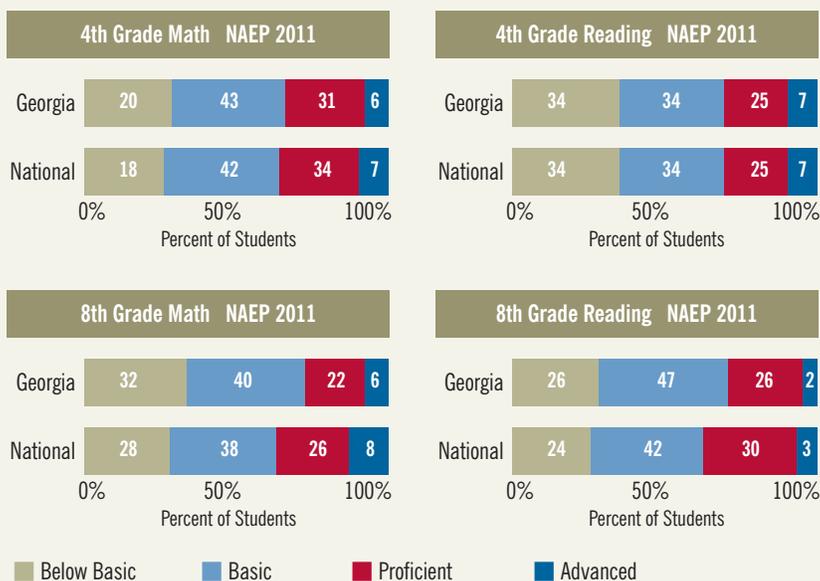
⁴⁴ The Nation's Report Card. "America's High School Graduates: Results from the 2005 High School Transcript Study." February 2007. Retrieved from http://nationsreportcard.gov/hsts_2005

remained a full six percentage points behind the national average (figure 15).

Figure 16 indicates how well Georgia students scored in comparison with the national average on recent NAEP measurements.

To be competitive with the rest of the nation, Georgia needs to accelerate progress in all areas in order to prepare our students for future success. Consider that in comparison with the nation, Georgia has a greater percentage of students scoring Below Basic on the mathematics assessments in both fourth and eighth grades, and Georgia has a higher percentage of students scoring Below Basic on the reading assessment in eighth grade.

FIGURE 16: 2011 MATH AND 2011 READING NAEP SCORES IN GEORGIA AND THE U.S.



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

Building Block for Success

Why are we not performing as well as other states? For student success, there are five essential building blocks for success (figure 17). Many successful states such as North Carolina, Texas and Virginia have had these building blocks in place since the mid-1990s. Georgia began our reform efforts for each of these in earnest in the mid-2000s, so we have been playing catch-up.

FIGURE 17: BUILDING BLOCKS FOR SCHOOL SUCCESS

- Higher Standards
- Rigorous Curriculum
- Clear Accountability System
- Statewide Student Information System
- Leadership Training

Higher Standards and a Rigorous Curriculum

In 2004, Georgia's education leaders adopted a new curriculum, the Georgia Performance Standards (GPS), which provided 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 drove both instruction and assessment in Georgia's schools.⁴⁵ In July 2010, Georgia adopted a new set of standards, the Common Core Georgia Performance Standards (CCGPS) for mathematics and English/language arts, which added an additional level of rigor aligned with college and career readiness. These standards were implemented during the 2012-2013 school year.

To assess students' mastery of the curriculum on the CCGPS in mathematics and English/language arts and the GPS in other tested subjects, Georgia currently administers the Criterion-Referenced Competency Tests (CRCT) in reading, English/language arts, mathematics, science and social studies in grades three through eight. 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's students in grades three, five and eight, performance on the state CRCT carries increased weight, as an insufficient score in these critical grades can result in retention. Students in the third grade who score below grade level in reading and students in the fifth and eighth grades who score below grade level in reading and/or mathematics must be provided additional

⁴⁵ For more information about Georgia's curriculum, see the Department of Education's website at <http://www.georgiastandards.org> or <http://www.georgiastandards.org>

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.⁴⁶

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 third grade are much less likely to graduate from high school.⁴⁷
- Children who are not calculating geometry and algebra on grade level by the end of eighth grade are less likely to be successful in postsecondary education.⁴⁸
- Students who take rigorous mathematics and science courses are much more likely to go to college than those who do not.⁴⁹

Figure 18 shows the number of children in Georgia who scored below grade level on the spring 2013 administration of the CRCT.⁵⁰

Georgia students are slightly stronger in reading than mathematics. In mathematics, more than one out of every five third-grade students in Georgia fails to meet standards of the CRCT, and more than 20,000 eighth-grade students (17 percent) perform below standards. When the data are disaggregated by race, the differences in the level of achievement become even more profound (figure 19).

Clear Accountability Systems **School and District Accountability**

Georgia is currently implementing reforms that will provide clear accountability systems for schools, districts, teachers and school leaders. The first is the implementation of the new College and Career Ready Performance Index (CCRPI), which measures the extent to which a school, district and the state are successfully making progress on a specific list of accountability measures.

Over the past decade, parents, teachers, administrators and the public in general became familiar with

FIGURE 18: GEORGIA'S STUDENT PERFORMANCE ON CRCT, SPRING 2013

| Content Area | Grade | # Students Tested | % Not Meeting Standards | # Students Not Meeting Standards |
|--------------------|-------|-------------------|-------------------------|----------------------------------|
| Reading | 3rd | 124,829 | 8% | 9,986 |
| | 5th | 123,897 | 7% | 8,673 |
| | 8th | 123,330 | 3% | 3,699 |
| Mathematics | 3rd | 125,495 | 22% | 27,609 |
| | 5th | 122,866 | 11% | 13,515 |
| | 8th | 122,487 | 17% | 20,823 |

Source: Georgia Department of Education. "Criterion-Reference Competency Tests Spring Briefing, 2013."

FIGURE 19: GEORGIA'S STUDENT PERFORMANCE ON CRCT BY RACE, SPRING 2013

| Content Area | Grade | % White Students Not Meeting Standards | % Black Students Not Meeting Standards | % Hispanic Students Not Meeting Standards |
|--------------------|-------|--|--|---|
| Reading | 3rd | 3 | 13 | 10 |
| | 5th | 3 | 11 | 9 |
| | 8th | 2 | 5 | 4 |
| Mathematics | 3rd | 13 | 33 | 24 |
| | 5th | 6 | 16 | 11 |
| | 8th | 10 | 27 | 18 |

Source: Georgia Department of Education. "Criterion-Reference Competency Tests Spring Briefing, 2013."

No Child Left Behind (NCLB) and the accountability measure it implemented: Adequate Yearly Progress (AYP). Parents would ask the question: Does my child's school meet AYP? This meant, did a certain percentage of children meet the performance standards set by the state – i.e., 80 percent of all third-graders are proficient in reading. If the school did not meet all the targets for all grade levels and student subgroups, it was labeled a failing school and targeted as a "needs improvement" school.

In February 2012, Georgia was among the first 11 states to receive a waiver to NCLB. Many of the

46 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

47 Education Commission of the States. "P-16 Quick Facts." 2007. Retrieved from <http://www.ecs.org/html/IssueSection.asp?issueid=76&s=Quick+ Facts>

48 Closing the Achievement Gap Advisory Council. "Closing the Achievement Gap: Definition and Approach." November 13, 2002.

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

50 Figures 18 and 19 include the spring 2013 CRCT test results. They do not include summer retakes that are used for accountability purposes and available in the fall of 2013.

elements required for the waiver were being addressed by the state's Race to the Top Grant (RT3). In 2012, Georgia was well underway in adopting many elements required by the waiver such as the implementation of the new Common Core Georgia Performance Standards, which would ensure our state had college and career ready standards and assessments.

At the time of the waiver application, Georgia was already engaged in developing a new accountability system, the CCRPI. It is this new system that replaces AYP. The CCRPI measures how well Georgia's schools are preparing their students to be successful in college and/or a career.

Instead of receiving a "meeting AYP standards" or a "failing" designation, the CCRPI provides each school a numeric score of 0–100. The basis for the CCRPI total score is a series of indicators for high schools, middle schools and elementary schools. The indicators are aligned with the state's definition of college and career ready, which means students graduate from high school fully prepared for college-level course work and careers, including the U.S. military.

Total scores are calculated in three areas: achievement, achievement gap closure and progress. Schools have an opportunity to increase their overall CCRPI score by earning bonus points based on a fourth area – Factors for Success indicators. These are voluntary for each school but are considered significant indicators to increase their overall score. Examples of such measures are the percentage of students participating in world language classes, whether a school has earned a science, technology, engineering and math (STEM) state certification, or the percentage of graduates earning physics credits.

CCRPI provides schools with an unprecedented opportunity for subsequent school improvement and planning. The individual indicators allow a school and a system to pinpoint where they are in need of improvement and where they excel, allowing for greater efficiency in resources and targeted interventions. The use of these data, analyzed by performance indicators and measures of achievement, progress,

and closure of the achievement gap, will also allow schools and districts to demonstrate their progress on improving student outcomes and closing the achievement gap.

Teacher Assessments

Another area of Georgia's reform efforts is the commitment to recruiting, rewarding and retaining effective teachers. As part of those efforts, the state has been developing and implementing a rigorous teacher assessment system that takes into account student growth. The assessments will provide timely and constructive feedback to inform professional development, promotion, retention, tenure decisions, and potentially, compensation.⁵¹

In the spring of 2012, GaDOE piloted the newly revised teacher assessment system, also known as the Teacher Keys Effectiveness System. More than 3,500 teachers from more than 550 schools participated in the pilot of this system, which generates a measure of teacher effectiveness based on a combination of three elements:

1. Teacher assessments based on performance standards, including observations and documentation of performance related to quality performance standards;
2. Surveys of instructional practices from students in intermediate, middle and high schools; and
3. Student growth and academic achievement.

In the fall of 2012, the teacher assessment system was rolled out to all schools within the 26 Race to the Top districts. The state is slowly expanding the number of participating districts and expects the system to be implemented statewide during the 2013-2014 school year.

Statewide Student Information System

Statewide longitudinal data systems (LDS) improve the ability of states to effectively manage, use and analyze education data to support instruction. The overall vision of the data system in Georgia is to

⁵¹ Ibid.

provide seamless data access to all users throughout Pre-K, K-12 and postsecondary for students, parents, teachers, administrators and researchers. It is designed to improve instruction by delivering student data, curriculum standards and instructional resources directly to teachers and ultimately parents electronically through a district's student information system.

To date, GaDOE has implemented a statewide longitudinal data system for grades K-12 that includes a unique identifier for all students. The system provides a permanent record that contains educational data on every student for the past six years – as long as they were enrolled in a public school within the state.

Not only does the data system track student performance, it acts as an instructional improvement system (IIS) for teachers and administrators as well. The LDS will incorporate teacher resources tied to each of the CCGPS. The system will provide teachers and parents with valuable resources related to the questions that were missed on an assessment by an individual student. The information provided is viewable by CCGPS domain and standard. Upon selecting a standard, users will be able to view resources that are aligned to that content. GaDOE is building a warehouse of electronic resources that will be available for teachers and parents.

It is important to note that the LDS is only a small portion of the total IIS being developed. When fully operational, the IIS will combine online student assessments, professional development, teaching assessments, metrics from the College and Career Ready Performance Index and digital resources linked to the Common Core Georgia Performance Standards to the desktop of every teacher in Georgia.

Leadership

Research has found that leadership disparities explain almost a quarter of the difference in student performance accounted for by schools.⁵² In school systems, the leadership role is paramount. School districts have enormous power to support principals and teachers in driving instructional improvement.

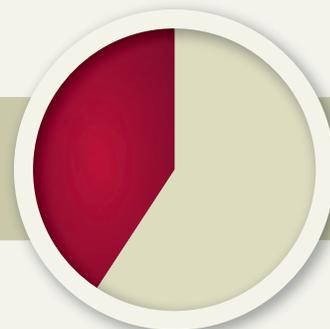
Research has shown that when district leaders effectively address specific responsibilities, they can – and do – have a profound, positive impact on student achievement in their districts.⁵³ Positive leadership at the district level can translate to effective leadership at the school level as well. Empowering school-level leaders is one of the most important steps districts can take to support student learning. Leadership is second only to classroom instruction among all school-related factors that contribute to student achievement.

In our state, the Georgia Leadership Institute for School Improvement (GLISI) is a nonprofit organization devoted to the success of educational leaders in meeting elevated expectations for improved teaching and learning. GLISI focuses on leadership development, policy influence, and research and analysis to support and equip educational leaders to drive change for student success.

The institute's signature leadership development program, "Base Camp and Leadership Summit" (BC/LS), is an intensive training partnership for teams of teacher leaders, school leaders and district leaders in Georgia that helps them refine and grow their ability to lead systemic school improvement. Since 2009, 77 of Georgia's 181 districts have sent a team to BC/LS for structured training in areas such as data analysis, performance management issues, root cause analysis and examining metrics.

FIGURE 20: GLISI BASE CAMP AND LEADERSHIP SUMMIT PARTICIPATION

43% of all Georgia districts have sent a team to BC/LS since 2009.



⁵² Ibid.

⁵³ Waters, J.T. and Marzano, R.J. School District Leadership that Works: The Effect of Superintendent Leadership on Student Achievement. Denver: Mid-continent Research for Education and Learning, 2006.

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 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 \$8,558, retention becomes a costly problem.⁵⁴ Consider the big picture, as shown in figure 21:

- At the end of Georgia’s 2011-12 school year, 56,406 students were retained – 3.5 percent of the total enrollment.
- An additional year in school for each of those students costs the state an average of \$8,558, adding up to an exorbitant sum that could be effectively used elsewhere.

How much of a cost burden is the epidemic of student retention likely to pose in your own community? Use the steps in figure 22 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

FIGURE 21: STUDENT RETENTION IN GEORGIA, 2012

| | | | | |
|-----------------------------------|---|--|---|---|
| 56,406 | x | \$8,558 | = | More than \$480 million |
| Georgia students retained in 2012 | | Average annual cost of education per student | | Total cost of student retention in 2012 for Georgia |

FIGURE 22: 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 |
|---|--|---|
| X | \$ | = |
| Cost of Student Retention this Year: \$ _____ | | |

times during their school career. And within the next 10 to 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.”⁵⁵ This research determines that had the United States 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 United States 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.⁵⁶

54 Georgia Department of Education. “FY 2011 School System Financial Reports: School Expenditure.”
 55 Auguste, B., Hancock, B., and Laboissière, M. “The Economic Cost of the U.S. Education Gap.” McKinsey Quarterly. 2009.
 56 McKinsey & Company. “The Economic Impact of the Achievement Gap in America’s Schools: Summary of Findings.” 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 Across Georgia. Recognize and reward the academic successes of schools in your local community and across the state. Take “best practices” back to your school system. Plan a local bus trip to highlight the achievements of your own schools.

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's Leadership Institute for School Improvement (www.galeaders.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 the use of a Balanced Scorecard. 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 experiences. 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 youths 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 schools and college sessions. Work with educational leaders to design academic enrichment programs that your community organization can offer to students.

continued

Ways to Make a Difference in Academic Achievement in Every Grade, continued

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.

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's Leadership Institute for School Improvement (GLISI). Visit www.galeaders.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 Postsecondary 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.⁵⁷ Closing this gap is essential to making certain that Georgia’s students are prepared for success after high school.

Postsecondary

In 2010, Anthony Carnevale of Georgetown University’s Center on Education and the Workforce released a study that showed by 2018, the nation will need 22 million new postsecondary degrees. However, as a nation, we will fall short of that number by at least 3 million.⁵⁸ The story is the same in Georgia. Postsecondary education and training has become a necessity for all young Georgians. By 2020, 60 percent of jobs in Georgia will require a postsecondary degree or certification, but only 42 percent of young adults have either today.⁵⁹ Closing this gap requires 250,000 more students to complete postsecondary programs over the next eight years.

In 2011, Governor Nathan Deal launched Complete College Georgia to address the skills gap facing our state. Supported by businesses and chambers of commerce, it is a statewide initiative that has brought together the University System of Georgia (USG) and the Technical College System of Georgia

(TCSG) to increase the higher education graduation rate through increased participation from traditional populations as well as engaging the wider pool of non-traditional students. The goal is to ensure that 60 percent of our young adult population has a postsecondary degree, which equates to the needed 250,000 new graduates. It is part of a larger effort, Complete College America, which seeks to improve postsecondary completion rates nationally.

College Readiness

Many young students already recognize the need for postsecondary training. The college enrollment rate in Georgia among recent high school graduates is 72 percent, which is higher than in many other states.⁶⁰ In addition, the number of students in postsecondary institutions has soared over the last decade. Enrollment in the USG grew by 36 percent between 2002 and 2011.⁶¹ The TCSG saw a corresponding increase, with annual growth at almost 30 percent between FY2008 and FY2011.⁶²

However, a significant proportion of these students will not finish the programs they begin at these institutions. Thirty-six percent of students who enroll in bachelor’s degree programs in the USG do not graduate and only slightly more than half graduate within six years. Only one-quarter of students who enroll in a two-year public school eventually graduate with a degree.

To increase the likelihood of college enrollment and success, there must be a focus on improving instruction and students’ academic preparation in high school. ACT’s research on the knowledge and skills

57 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*. 2010.

58 Carnevale, A., Smith, N., and Strohl, J. “Help Wanted: Projections of Jobs and Education Requirements through 2018.” Washington, DC: Georgetown University, Center on Education and the Workforce. 2010.

59 Ibid.

60 Collins, C. “Measuring Success by Degrees: The Status of College Completion in SREB States.” 2010. Retrieved from http://publications.sreb.org/2010/10E13_Measuring_Success.pdf

61 University System of Georgia. “Ten Year Enrollment Report: Fall 2011.” December 19, 2011. Retrieved from http://www.usg.edu/research/documents/enrollment_reports/rpt02-11.pdf

62 Technical College System of Georgia. “Technical College System of Georgia Fast Facts and College Directory 2011-2012.” Retrieved from <https://tcsgeu.edu/>

FIGURE 23: HIGHER EDUCATION COMPLETION RATE FOR FULL-TIME STUDENTS

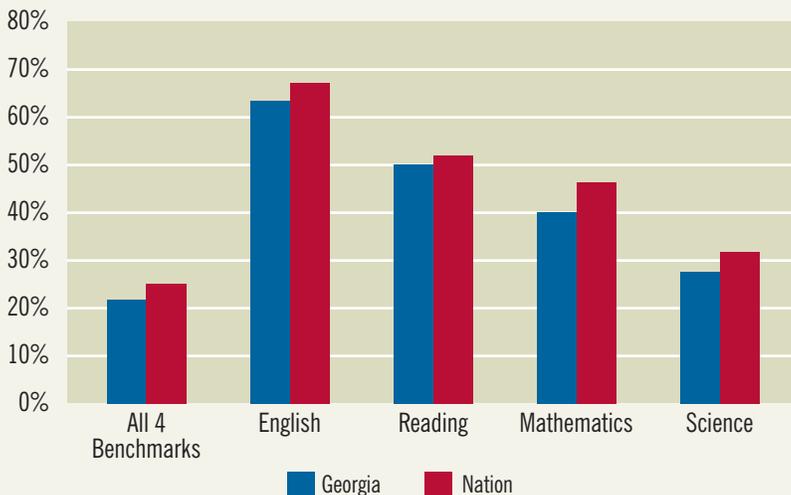
100 Students Entering a Georgia Public College or University

| 2-Year Public College: Full Time | 4-Year Public College: Full Time |
|----------------------------------|----------------------------------|
| Enrolled37% | 44%.....Enrolled |
| Returned as sophomores54% | 82%.....Returned as sophomores |
| Graduated in 2 years11% | 25%.....Graduated in 4 years |
| Graduated in 3 years8% | 32%.....Graduated in 6 years |
| Graduated in 4 years5% | 7%.....Graduated in 8 years |
| Total Graduates*24% | 64%.....Total Graduates |

* Graduation percentages based on the number of enrolled students.

necessary for success in college courses resulted in the establishment of the College Readiness Benchmarks. These benchmarks are ACT subject area scores that represent the level of achievement required for students to have a 50 percent chance of obtaining a B average or higher, or about a 75 percent chance of obtaining a C or higher in corresponding credit-bearing first-year college courses.⁶³ More than 30 percent of students met no benchmarks at all. As shown in figure 24, only 22 percent of Georgia students meet this benchmark across all four subject areas.

FIGURE 24: PERCENTAGE OF 2012 ACT-TESTED GEORGIA HIGH SCHOOL GRADUATES MEETING COLLEGE READINESS BENCHMARKS BY SUBJECT



Source: ACT. "College and Career Readiness in Georgia." 2013. Retrieved from <http://www.act.org/newsroom/data/2012/states/pdf/Georgia.pdf>.

In order to address the higher education readiness issue, the Complete College Georgia plan calls for collaboration with the Georgia Department of Education (GaDOE) to increase the rigor of standards and assessments for students in the K-12 system.

In June 2010, the Georgia State Board of Education adopted the Common Core Georgia Performance Standards (CCGPS). These standards were developed by a group of experts convened by the National Governors Association and the Council of Chief State School Officers with support from state education leaders. A guiding principle of their development was the commitment that the standards would be college and career ready. To date, 45 states and the District of Columbia have adopted and are implementing the Common Core, which covers two subject areas: mathematics and English/language arts (ELA). The focus is limited to these subjects because they are the building blocks for learning in other areas, including science, social studies and fine arts. The Georgia Performance Standards (GPS), implemented in 2004, will continue to guide instruction in these other areas.

Moreover, to prepare students for work after high school and to facilitate students' transition to postsecondary institutions, the GaDOE is expanding several initiatives: Advanced Placement, International Baccalaureate, Early College, Dual Enrollment and Career Academies. All of these enable students to earn college credits while still in high school.

College Access

Ensuring all students have access to postsecondary institutions is an essential element for meeting Georgia's goal of more students completing postsecondary programs. Almost three-quarters of Georgia's high school graduates enter a postsecondary institution in the year after graduation.⁶⁴ Compared to many states, this is a relatively high number, yet it still means that over a quarter of the state's high school graduates do not attempt postsecondary study and will not gain its benefits.

63 ACT. *College and Career Readiness in Georgia*. 2013. Retrieved from <http://www.act.org/newsroom/data/2012/states/pdf/Georgia.pdf>
 64 Collins, C. *Measuring Success by Degrees: The Status of College Completion in SREB States*. Southern Regional Education Board. 2010. Retrieved from http://publications.sreb.org/2010/10E13_Measuring_Success.pdf

Beyond this, there are differences in college going rates among students based on their geography, ethnicity and income. In 32 school districts, an average of 40 percent or more of high school graduates did not enroll in postsecondary institutions between 2000 and 2007.⁶⁵ In other districts, 80 percent or more of graduates went on to study at postsecondary institutions. Figure 25 lists the districts with the highest and lowest average enrollment rates between 2000 and 2007.

Some of this disparity reflects differences in poverty rates or other factors that influence high school graduation and college enrollment rates. Nevertheless, geography matters.

Multiple factors deter students from pursuing postsecondary study, two keys being affordability (the cost of enrollment and the availability of financial aid to offset those costs) and information about and support for enrollment, which many students do not receive.

FIGURE 25: AVERAGE POSTSECONDARY ENROLLMENT RATE, 2000–2007

| Top 5 Districts | |
|--------------------|-------------------------|
| District | Average Enrollment Rate |
| Fayette County | 84.4 |
| Oconee County | 82.7 |
| Columbia County | 81.3 |
| Decatur City | 80.4 |
| Chickamauga County | 80.3 |
| Bottom 5 Districts | |
| McIntosh County | 35.3 |
| Taliaferro County | 43.6 |
| Jenkins County | 44.9 |
| Greene County | 48.2 |
| Meriwether County | 51.2 |

The U.S. Department of Education has awarded Georgia \$12 million since 2008, which was matched by \$6 million in state funds, to increase postsecondary degrees for Georgia students who are traditionally underrepresented. These funds are targeted at low-income and first-generation college students and adults with some college but no degree. The College Access Challenge Grant (CACG) strategies have included the following:

- Book grants to dual enrollment students, a cost now covered by Georgia’s dual enrollment funding;
- Enhancements to GACollege411, the state’s web-based portal to help students plan for, apply and pay for college;
- Georgia Apply to College events at high schools with large percentages of underrepresented students; and
- Near Peer Service Learning courses through which current college students mentor high school seniors through the college admission, financial aid and enrollment processes.

College Completion

To build upon the work happening in K-12, under the Complete College Georgia plan, the USG and TCSG are working together to develop strategies aimed at improving higher education completion rates. Three key focus areas are 1) strengthening remedial courses, 2) shortening time to degree and 3) restructuring delivery.

Students who enter without adequate preparation are required to enroll in remedial courses that do not count toward a certification or degree program. These students have lower graduation rates than those who do not require remediation. Students who enter bachelor’s degree programs in the USG and take remedial courses have a six-year graduation rate of 24 percent. Those who enroll in associate degree programs and receive remediation in the USG and/or

⁶⁵ Governor’s Office of Student Achievement. “First Annual Report of Georgia’s Students’ High School to College Transition.” August 2009. Retrieved from [http://archives.gadoe.org/DMGetDocument.aspx/GOSA%20NSC%202000-2008%20web%20\(updated\).pdf?p=6CC6799F8C1371F642F11AB918C1EEAE81DF038309C3D1C9168ED53065A5B999&Type=D](http://archives.gadoe.org/DMGetDocument.aspx/GOSA%20NSC%202000-2008%20web%20(updated).pdf?p=6CC6799F8C1371F642F11AB918C1EEAE81DF038309C3D1C9168ED53065A5B999&Type=D)

TCSG have a three-year graduation rate of 7 percent. The implications for the number of students requiring remediation not only have individual costs to the student, but to the state as well. By reducing the need for remediation, it is estimated that Georgia could save over \$27 million per year. Additionally, if students entered college ready to learn and were not delayed by taking remediation classes, thereby increasing their chances of graduation, it is estimated an additional \$47 million would be added to the state's economy through increased earnings.⁶⁶

The two systems are working to improve the remediation process. The University System is taking the following steps:

- Modularizing remedial courses
- Creating alternate paths for students who are significantly behind
- Developing options for students to work at their own pace
- Integrating support to teach success skills.⁶⁷

Students who progress slowly toward a degree are more likely to drop out.⁶⁸ One approach to helping students move expeditiously toward program completion is facilitating transfers through articulation agreements and providing timely information about transfer options. A second strategy is allowing students to earn credit for knowledge they have gained in other settings such as dual enrollment courses while still in high school, Advanced Placement (AP) credit, and the administration of Prior Learning Assessments (PLA). The PLAs will provide a pathway to enable millions of primarily non-traditional students who have stopped short of a degree but who have acquired knowledge through other means (e.g., work experience or military service), a chance to complete their education.⁶⁹

Finally, both the USG and TCSG are restructuring

their delivery systems to meet the needs of the diversifying student body. The USG will focus its restructuring in five areas:

1. Building and sustaining effective teaching,
2. Exploring and expanding the use of effective technology models,
3. Distance education,
4. Adult and military outreach, and
5. Science, technology, engineering and math (STEM) initiatives.⁷⁰

Georgia has passed the Graduation Rule, raising the state's high school graduation requirements to the college and career ready level. Georgia is one of only 24 states (including DC) with requirements at this level.

**GEORGIA'S COLLEGE AND CAREER READY
COMMITMENT ACHIEVE**

Workforce Readiness

Fifty years ago, a large portion of jobs were classified as unskilled, attainable by people with a high school diploma or less. Today, only one-fifth of jobs are considered unskilled. While the demand for higher skilled workers has increased, the production of such workers has remained flat.⁷¹ In 2010, 81 percent of Georgia's jobs required middle or high levels of skills (jobs that required some postsecondary education or training). Yet only 36 percent of Georgia adults had any level of postsecondary experience.⁷² As figure 26 shows, a majority of jobs in Georgia are middle skill jobs, which include occupations such as clerical, sales, construction, installation/repair, production, transportation, etc.

Georgia demonstrates a strong commitment to preparing students for success after high school. Because a significant number of students choose

66 The Alliance for Excellent Education. *Issue Brief: Paying Double: Inadequate High Schools and Community College Retention*. 2012

67 Ibid.

68 Complete College America. *Time is the Enemy*. September 2011. Retrieved from http://www.completecollege.org/docs/Time_Is_the_Enemy_Summary.pdf

69 The University System of Georgia & The Technical College System of Georgia. *Complete College Georgia: Georgia's Higher Education Completion Plan 2012*. 2012.

70 Ibid.

71 Achieve. *How Well Is Georgia Preparing All Students for College, Careers, and Life?* 2012.

72 Ibid.

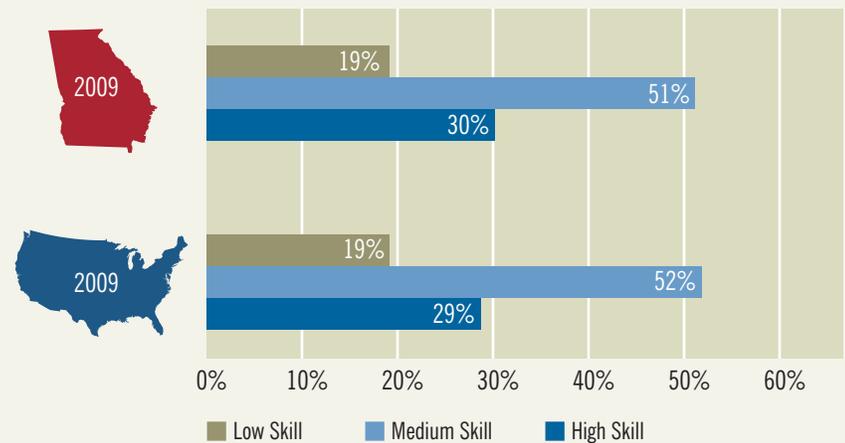
not to attend college, it is important that they have the skills to be successful in the workforce in these middle skill jobs upon graduating from high school.

School to Work Job Readiness

Historically, we have offered 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 do require a high skill level. These careers offer the earning potential to support a small family and 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.⁷³

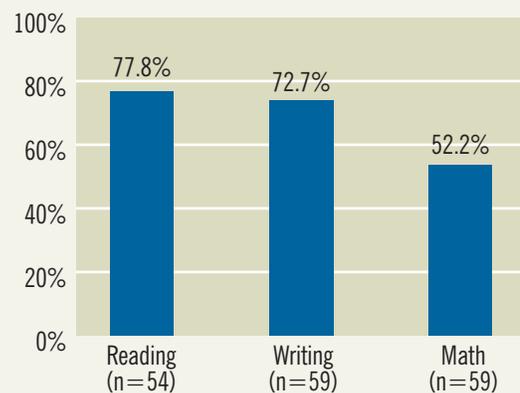
Unfortunately, too many students graduate from high school without these skills. In a survey of 217 employers, 34 percent stated that their recently hired high school graduates were not sufficiently prepared to enter the workforce.⁷⁴ Many companies have a need for workers with critical thinking skills 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.⁷⁵ 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 27. 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 26: EMPLOYMENT SHARES BY OCCUPATIONAL SKILL LEVEL



Source: National Skills Coalition. *The Bridge to a New Economy: Worker Training Fills the Gap*. 2012. Retrieved from <http://www.nationalskillscoalition.org/assets/reports-/the-bridge-to-a-new-economy.pdf>; National Skills Coalition. *Driving Innovation from the Middle*. Retrieved from http://www.nationalskillscoalition.org/assets/reports-/nsc_sga_middleskillsbrief_2011-08.pdf

FIGURE 27: TRAINING GAPS IN BASIC SKILLS



Source: The Conference Board. "The Ill-Prepared U.S. Workforce." 2009. 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.

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

74 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.

75 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 addition to academic skills, employers have a need for workers with a number of applied skills such as creativity, teamwork and leadership. Again, many of the companies that identify these skills as “high need” do not offer training for these skills (see figure 28). These areas are important both to career and college success but are often overlooked in school in favor of academic preparation. Yet, it is apparent that we must make the time to develop these skills in students as well.

To address this middle skills gap and the overall need for students to be college and career ready upon graduation, Georgia has implemented career clusters and career academies.

The College and Career Academy model helps businesses partner with local high schools and technical colleges to allow students to obtain a technical certificate upon graduation to begin employment with a local company. These students receive specific training and develop specialized skills needed to pursue a career path catered to their individual skill set. Many students work toward postsecondary education while they are still in high school.

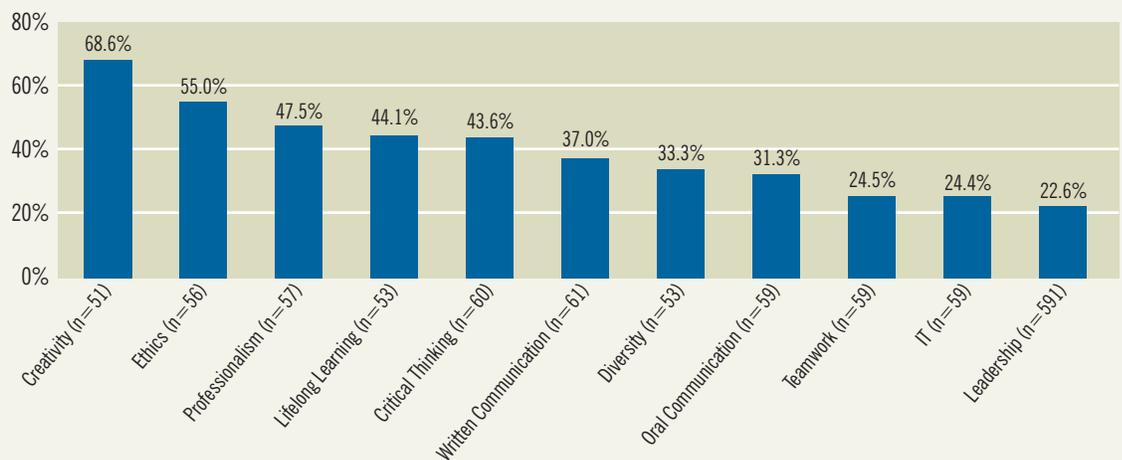
Georgia's Career Clusters allow students to choose an area of interest in high school from 17 different career clusters, ranging from banking to manufacturing to transportation. There are also three additional pathways available to students in world languages, fine arts and advanced academics. The aim of the program is to show students the relevance of what they are learning in the classroom, whether they want to attend a two-year college, a four-year university or go straight into the world of work. Students will begin to learn about potential careers in elementary and middle school so that they are ready to choose a pathway once they reach high school.

Career and Technical Education

Within the career cluster model are the Career, Technical and Agricultural Education (CTAE) pathways. Historically, vocational education was viewed as a path for students who lacked the desire or skill to pursue higher education. Currently though, vocational education is a valuable aspect of our educational programs. The federal government shows its commitment to career and technical education (CTE) with every reauthorization of the Perkins

FIGURE 28: HIGHLY NEEDED APPLIED SKILLS TRAINING THAT IS NOT OFFERED BY EMPLOYERS

Gap of Training in Applied Skills: Skills defined as “high need” yet no trainings offered.



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.

This graph shows the percentage of employers who identify a high need to develop an applied skill among their workforce but choose not to provide that training. For instance, 68.6 percent of employers who identify a high need for training in creativity do not provide the resources for this training.

FIGURE 29: CTAE PATHWAYS OFFERED IN GEORGIA

| | | |
|---|--|--|
| <ul style="list-style-type: none"> ➤ Agricultural Education ➤ Architecture, Construction, Communications, & Transportation ➤ Business & Computer Science | <ul style="list-style-type: none"> ➤ Culinary Arts ➤ Education ➤ Engineering & Technology Education | <ul style="list-style-type: none"> ➤ Family & Consumer Sciences ➤ Government and Public Safety ➤ Healthcare Science |
|---|--|--|

Source: Georgia Department of Education. "Career, Technical and Agricultural Education Annual Report 2011." Retrieved from <http://www.doe.k12.ga.us>

Note: Not all programs are offered at the middle school level.

Vocational and Technical Education Act. Congress authorized the fourth version of The Perkins Act in 2006, placing greater emphasis on the integration of CTE courses with high academic standards. The Perkins Act provides federal funding to states for the improvement of CTE programs in secondary and postsecondary schools.⁷⁶

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 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 (figure 29). The majority of Georgia's students enroll in the program – 61 percent of all high school students and 51 percent of all middle school students enrolled in at least one CTAE course during the 2010-2011 school year.⁷⁷ The program is yielding positive results. The high school graduation rate of students with CTAE concentrations in 2011 was 90 percent compared to the state overall rate of 67.5 percent.⁷⁸

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

these gaps, but they can prepare students for tomorrow's jobs as well.

Because of our rapidly changing economy, we cannot predict with certainty what opportunities lay 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 teamwork and professionalism. 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.

Go Build Georgia

The skilled trades that helped build Georgia's diverse economy have seen a drastic reduction in the number of new laborers over the past decade. For every four workers that retire from a skilled trade position, the industry is only producing one to take their place. This has left a critical skills gap that must be addressed. Over the next four years, 82,000 skilled trade job opportunities are expected to become available. This includes positions for electricians, welders, certified drivers and construction managers.⁷⁹

To address this issue, the Governor's Office of Workforce Development created the Go Build Georgia Campaign. This campaign is designed to educate young people on the value of learning a trade, dispel their misconceptions about the skilled trade industry and inspire them to consider building a career as a skilled tradesman. Through this public awareness effort, Go Build provides better opportunities for craft

76 Office of Vocational and Adult Education. Retrieved from <http://www2.ed.gov>

77 Georgia Department of Education. "Career, Technical and Agricultural Education Annual Report 2011." Retrieved from <http://www.doe.k12.ga.us>

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

79 Go Build Georgia. "Go Build Georgia Celebrates One Year Anniversary." Retrieved from <http://gobuildgeorgia.com/news/2013/01/go-build-georgia-celebrates-one-year-anniversary/>

tradesmen, more highly skilled employees for businesses and enhanced economic development for Georgia and the nation. Go Build Georgia is currently in the planning phase to increase apprenticeships and corporate on-the-job-training opportunities with its business partners and sponsors to ensure that Georgia's industries have the strong, highly skilled workforce that they need to remain competitive both nationally and internationally.⁸⁰

Demographic Changes and the Workforce

The 2010 census data revealed significant demographic shifts that could have critical policy implications in the future. A study of the new census data by the Brookings Institution reveals the United States is undergoing the most significant socio-demographic change since the last significant wave of immigration in the early 20th century.⁸¹ The demographic trends suggest that the United States will add 50 million new Americans by 2025. Due to trends in birthrates, and to a lesser extent immigration patterns, over the past decade, 83 percent of the population growth has been from ethnic minorities. By 2025, it is predicted there will no longer be a majority racial or ethnic group in the United States, meaning no one group will make up more than 50 percent of the total population.⁸² Moreover, the population is expected to become considerably older. The number of those over 65 now exceeds 100 million, and that number is expected to continue to increase. In general, states and local communities can expect that their older populations will comprise non-Hispanic whites and their younger populations will be made up of minorities.

Over the past decade, Georgia has experienced the same population shifts as the rest of the country. Since 2000, the state added more than 1.6 million people within its borders, with the growth concentrated in non-white and low-income populations. See figure 30 for a breakout of these trends.

Changes in the student population of Georgia's public schools are reflective of the changing

FIGURE 30: DEMOGRAPHIC SHIFTS IN GEORGIA 2000–2010⁸³

| | 2000 | 2010 |
|-----------------------|-----------|-----------|
| Total Population | 8,186,453 | 9,815,210 |
| % White | 65% | 63% |
| % Black | 29% | 31% |
| % Hispanic | 5% | 9% |
| % Asian | 2% | 3% |
| % Children in Poverty | 17% | 27% |

demographics across Georgia. An examination of overall number of children enrolled in the K-12 system shows there has been a slight decrease in white students as a percentage of total students enrolled and a corresponding increase in the percentage of Hispanic students enrolled (3 percentage points for each). Interestingly, while the number of African Americans in Georgia has increased as a total percentage of the population, the percentage of black students enrolled in the public school system has remained relatively constant. The overall percentage of children eligible for free and reduced price lunch – a proxy measure for low-income – has been steadily rising (figure 31).

Georgia needs to be focused on preparing students for the jobs of tomorrow. Technical and high-skilled workers are in demand, especially in the STEM (science, technology, engineering and mathematics) fields. By 2018, the number of STEM jobs in Georgia will increase 17 percent, an increase of 200,000 new jobs.⁸⁵ Minorities are traditionally underrepresented in these fields. Concerted efforts must be made to not only reduce the overall achievement gaps for minority and low-income students, but those students must also become more engaged in the technology and professional fields.

⁸⁰ Ibid.

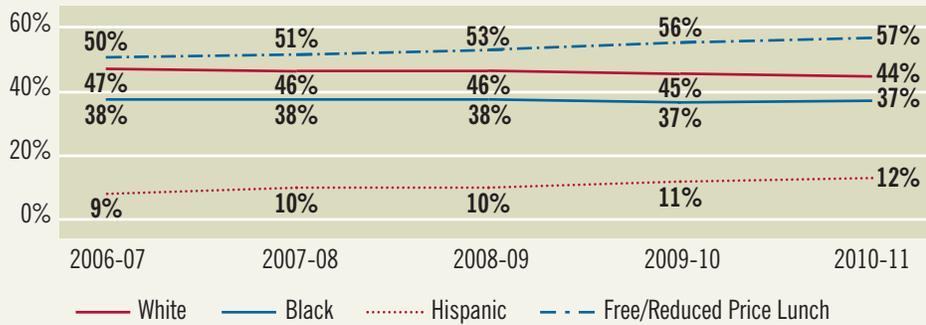
⁸¹ Brookings Institution. *An Impending National Transformation*. May 9, 2010. Retrieved from <http://www.brookings.edu>

⁸² Ibid.

⁸³ U.S. Census Bureau. "State and County Quick Facts." 2000/2010. Retrieved from U.S. Census Bureau: <http://quickfacts.census.gov/>

⁸⁴ Georgia Department of Education. Note: The graph shows selected race categories, so totals for each year may not add to 100 percent.

⁸⁵ Ibid.

FIGURE 31: THE CHANGING FACE OF GEORGIA'S K-12 PUBLIC SCHOOLS⁸⁴

The population that schools educate is increasingly composed of children of color and of Hispanic origin. The nation's population is also aging, meaning that those the system depends on for funding are increasingly older, non-Hispanic, and do not have school-aged children. Finally, the achievement gap between student groups will have increasingly more serious economic consequences both for the

individual and for overall economic competitiveness. For years, minorities have been underrepresented in professions such as science, medicine and engineering.⁸⁶ With the non-minority population shrinking and the entry-level workforce increasingly made up of minorities, the state could face serious shortages in critical professions.

⁸⁶ Crouch, R. *The United States of Education: The Changing Demographics of the United States and Their Schools*. The Center for Public Education. 2012.

Ways to Make a Difference in Transition to Work or Postsecondary 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 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.

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.

Offer to assist students in filling out their college applications during the annual Georgia Apply to College event at your local high school. Visit www.usg.edu/apply-to-college for more information and to volunteer.

Encourage your local chamber of commerce to sponsor a Friday Night/College Lights event at one of your community's upcoming football or basketball games. Visit http://www.usg.edu/apply-to-college/documents/friday_night_college_lights.pdf to download the “How To” guide.

Serve as a mentor. As a mentor for a middle school or high school student, encourage and help them establish an account at www.GACollege411.org and use the resources and tools on the website regularly.

Community Support for School Improvement

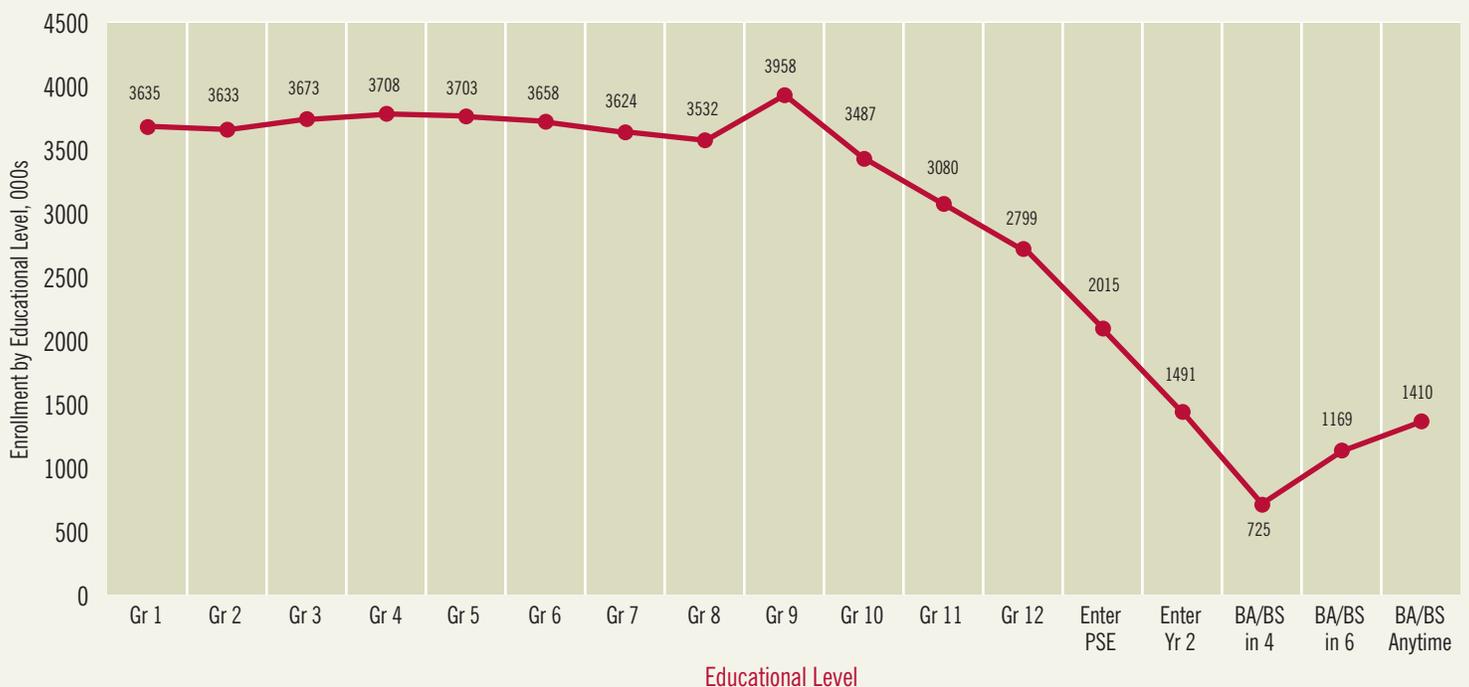
The opportunity to improve the academic achievement of all students is not limited to educators alone. There is much the community can do to support the school improvement efforts. Business and civic leaders can work with educators to design ways to support and encourage the strategies schools are using 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, industry and national security. Additionally, an educated work force with higher salaries boosts 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 pipeline. The support of local communities is needed 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 32 gives a projection of the number of students enrolling in first grade and the number that actually graduates from high school. The projection shows how dramatically the student population from elementary school to high school and postsecondary institutions drops over time. This representation, however, need not represent Georgia's future. The talented and dedicated leaders in Georgia's communities have the tools to plug every leak in the educational pipeline.

FIGURE 32: EDUCATIONAL PIPELINE: GRADE 1 THROUGH BACHELOR'S



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

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 Action 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 supports the three-step strategy for realizing a region's full potential outlined by the Southern Growth Policies Board: convene–connect–commit.⁸⁷ 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, the Family Connection Partnership, local chambers of commerce and local colleges. 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*, second edition, to see a sample community plan and to acquire additional details about developing a community plan. Call the Partnership's office for information on how the organization can help facilitate the process of community planning for school improvement in your area. Our work is customized based on the needs of the individual county. However, for all the counties we have assisted, there is always a heavy focus on local data and the modification of the three-step strategy: convene–connect–commit.

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 for all students; and preparation for work or postsecondary 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. The remaining question is: What can you do to help improve education and economic development in Georgia?

⁸⁷ Southern Growth Policies Board. "Work. Knowledge. Passion: The 2007 Report on the Future of the South." 2007.

For More Information and Support

The following websites provide information that support the key issues outlined in this document. This is not intended to be an exhaustive list of websites but merely a sampling of online resources that provide specific state and national data and information related to the education or well-being of children.

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 in Georgia's public schools.

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 economically prosperous. The Chamber is an excellent resource for information on timely legislative issues on education.

Georgia Department of Education – www.gadoe.org

This comprehensive website offers information on public school policies, operations, curricula, calendars and contact information. The site also provides details on testing, exceptional students, classroom instruction, technical career education and more.

Georgia Family Connection Partnership – www.gafcp.org

This resource tracks critical information especially relevant to the influences of early life experiences on education. The information includes comprehensive reports listing, by county, numerous indicators related to children's well-being including demographics, child health, family health and welfare, school readiness and school success. This site is also a viable resource for communities developing strategic plans.

Georgia Early Education Alliance for Ready Students (GEEARS) – www.geears.org

GEEARS is helping employers and communities build quality early education programs that give children the foundation to excel in K-12, college and the workforce.

Georgia's Leadership Institute for School Improvement – www.galeaders.org

Georgia's Leadership Institute for School Improvement is a partnership devoted to the success of Georgia's educational leaders in meeting elevated expectations for student achievement and school performance. 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

This site 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.

continued

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

This site includes a fact sheet with relevant data and links to organizations addressing the well-being of Georgia's children.

Communities in Schools of Georgia – 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.

The Education Trust – www.edtrust.org

This national nonprofit education organization provides detailed information and advocacy tools that impact national and state education issues. Ed Watch Interactive is a source of state data on educational performances and equity, pre-kindergarten through college.

U.S. Chamber of Commerce – www.uschamber.com

The world's largest business federation, representing more than 3 million businesses of all sizes, sectors and regions, provides a wealth of information on its website. Particularly relevant is the site's collection of information and data on the issue of education and workforce training.

Achieve – www.achieve.org

Created by the nation's governors and business leaders, Achieve helps states raise academic standards and achievement so that all students graduate ready for college, work and citizenship. Its website provides state-level data and information about education reform initiatives such as the American Diploma Project.



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