



The Game Plan
A Regional Strategy for
Strengthening Pennsylvania's
Workforce

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“The business community cannot afford another minute of inaction; we must advocate to get students, our potential employees, what they need to acquire the skills our businesses demand. When we adequately invest in every kid in every neighborhood, we are investing in a middle class. We are funding opportunities for economic self-sufficiency. We are lifting families out of generational poverty. We are creating employees capable of earning family-sustaining income. We are educating graduates that are workforce ready.”

Mike Pearson, President, Union Packaging



Executive Summary



These headlines aren't made up, nor are the complaints limited to a few obscure companies. Giants like Amazon have chosen to invest in sizable operations in states other than Pennsylvania. The strength of the local workforce and share of qualified workers available to power their business factored in to their decisions.

In fact, news about Pennsylvania's inability to produce a supply of workers to adequately meet its labor demands is all too common. Pennsylvania's labor pool is shrinking. Specifically:

- + Pennsylvania is one of the slowest growing states in the nation. In 2017, the Commonwealth's population grew by one tenth of 1% giving it a rank of 39th nationally in population growth.⁴
- + Every year, the state's retirement age population grows by 61,000.⁵
- + The Commonwealth's "working-age" population (age 25 to 64) is expected to decline every year until at least 2030, according to the National Association of Workforce Boards.⁶

The impact of a declining workforce, however, is exacerbated by a more complex problem; many of the Commonwealth's workers are ill-equipped to fill positions in businesses that rely on an increasingly skilled workforce. In fact, a majority of Pennsylvania's employers report having difficulty finding workers who are qualified to fill open jobs.⁷

Combined, these facts send a clear message: to sustain its economy, Pennsylvania needs workers. To *enhance* its economy, Pennsylvania needs more skilled employees.

While there are various proposals for fortifying Pennsylvania's labor pool with more skilled workers, ie, importing workers from other states or countries, implementing comprehensive workforce development programs, etc., these measures are not viable long-term solutions. Currently, the regions' businesses are looking for more than 50,000 skilled employees.⁸ Even if the region *could* upskill the likeliest candidates, the region's 8,942 working-age unemployed and underemployed, only a fraction of the labor force's needs would be addressed.⁹

Moreover, relying heavily on such strategies sidesteps a significant opportunity to grow and develop talent within our region. Southeastern Pennsylvania has at its disposal a large pool from which it can draw the next group of workers who will shape the state's economy. The region's annual graduating class of nearly 40,000 students is the most promising source of employees for our employers, if they are prepared for the jobs our employers need them to do.

More than 550,000 students attend public schools across the five county region.¹⁰ While the large majority graduate high school prepared to enter the workforce or to tackle post-secondary coursework, far too many do not. Just as the headlines stressing the need for qualified employees are not fictitious, the disconnect between the skills that students know and the skills employers need is real and has had a significant impact on the region.

Clearly, a new game plan for the Southeast Region to produce more students who leave high school skilled and equipped to bolster Pennsylvania's economy is needed.

The game plan is simple: prepare students early and prepare them well.

To effectively do this, the region must adopt and implement three key strategies:

- 1. Take Advantage of Pre-K's Huge Return on Investment**
- 2. Close the Capital and Resource Gap for Schools; and**
- 3. Optimize Career and Technical Education (CTE) Infrastructure**

Introduction

Southeastern Pennsylvania leads the state in job creation and economic growth. Remarkably, although inhabiting only 5% of the state's land, Bucks, Chester, Delaware, Montgomery and Philadelphia counties are home to:

- + A third of the state's private sector businesses¹¹ and a third of the state's employed workforce¹²
- + Forty one percent of the state's economic activity¹³; and
- + Nearly \$11 billion, or roughly 36%, of the state's total tax revenue from sales, income, corporations and estate and realty transfers.¹⁴

In this dynamic region tens of thousands of students are being educated:

- + More than 39% of suburban county residents are college graduates¹⁵ and
- + In Philadelphia, more than 26% of the population has at least a bachelor's degree.¹⁶

Although these statistics cement the Greater Philadelphia region as an economic powerhouse, others reveal an alarming trend. To put it simply, the region is not producing enough skilled workers to grow its economy.

Across industries and sectors in the Greater Philadelphia region, more than half of all employees are entering the workforce lacking credentials and skills that businesses deem essential to their business' productivity.¹⁷

This dearth of qualified laborers has left employers throughout the region with challenges filling entry-level through senior management positions. In fact, when asked about the greatest obstacles their businesses face, no less than a third reported that there were not enough mid, senior and professional level applicants.¹⁸

Consequently, businesses are spending a significant amount of time and resources trying to fill positions that require a skill set that even the most qualified applicants do not have. Half estimate that they have lost between 50 to 500 hours of productivity to train or retrain new employees to prepare them to do their jobs and, in the Southeast, businesses are spending about \$60 million annually to do so.^{19, 20} If these concerns were limited to a few employers, one might assume that organizational expectations are too high.

However, across the state and throughout the region, the disconnect between the skills employers expect employees to have and the proficiencies employees actually possess is growing. On average, more than half of the region's businesses believe that the workforce lacks relevant experience to do a specific job.²¹

Given that the region produces more than 39,000 high school graduates annually, the regions' businesses should be flush with skilled workers. But in 2017, an estimated 21,000 of Pennsylvania's students left high school without being adequately prepared to enter the workforce.²² In fact, out of 10 other northeastern states, Pennsylvania ranks 9th in producing students that are prepared for college or work after graduation from high school.²³

The purpose of education is not simply to produce workers, but generations of well-adjusted, well-rounded adults who contribute to society and choose to remain in the region. However, if more students from Southeastern Pennsylvania graduated from high school with solid foundational skills, the likelihood that they will mature into adults who can earn a decent living and support families is significantly greater.

To move the region's students up the ranks and assist them in becoming more competitive across the region, statewide, nationally and internationally, they must graduate from high school with the foundational skills that support successful completion of post-secondary training programs and prepare them for the demands of the workforce. Options such as the creation of more high performing schools, increased school and business partnerships, investment in career and technical programs and courses that allow students to earn college credits while in high school have been proposed and executed in pockets to address the high school-college-career preparedness gaps. However, there is no uniform approach to implementing these programs in the region.

To create a more dynamic workforce, the region must uniformly address the issue where it begins – early in school. Philadelphia and its four suburban counties must develop a game plan to ensure that students attain foundational skills at each stage in their preschool-12th grade careers. If a student repeatedly achieves benchmarks and masters grade level content, he or she will attain solid skills and be career-ready or equipped to receive additional education prior to entering the workforce.

The region is the keystone of the state's economy. If it is to remain that way, all of its students must have the resources they need to level up.

This report advances three key strategies to ensure that the region's students graduate ready:

- + Taking advantage of Pre-K's significant return on investment
- + Closing the capital and resource gaps for public schools
- + Optimizing career and technical education infrastructure

Regional Labor Market Changes Have Contributed to the Disconnect Between the Skills Employers Have and the Skills Their Businesses Need

Philadelphia and the surrounding suburbs comprise the most populous and diverse region in the state, with a significant number of highly-ranked colleges and universities, a strong economy and an immersion in art and culture. However, one of the leading reasons for the area’s extraordinary output is the existence of a strong corporate presence and significant number of employees. Combined, Bucks, Chester, Delaware, Montgomery and Philadelphia counties are home to more than 100,000 businesses.²⁴ Moreover, as of August 2018, 31% or nearly two million of the state’s employed labor force of 6.1 million people are employed in the five southeastern Pennsylvania counties.²⁵



Philadelphia and its surrounding suburbs generate about 41% of the state’s economic activity

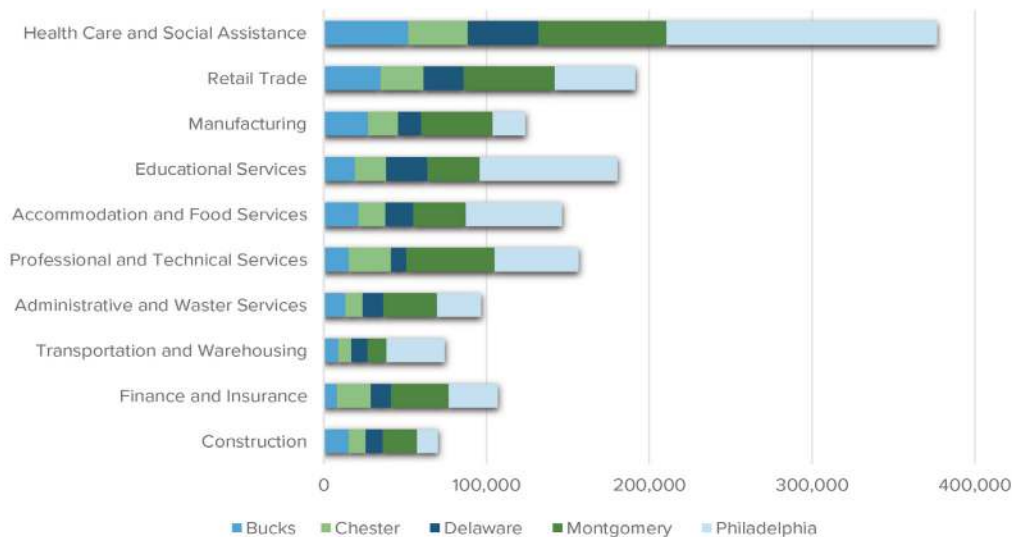


Over the last several decades, like the rest of state, the region’s workforce has undergone steady changes. These shifts have had a lasting impact on the region’s businesses. As the 20th century ended, the local labor market changed from being driven by manufacturing, construction and other jobs that produced goods, to having more workers enter knowledge and service-oriented professions such as engineering, research, education, health and social services.²⁶

Many moderate pay, mid-skilled, and blue-collar positions disappeared. For example, from 1990-2010, the region’s blue-collar sector experienced a startling 28% decline in jobs.²⁷

Meanwhile, during the last decade, the region has added more low and high end service-providing jobs than anywhere else in the state while simultaneously losing more goods-producing jobs than any other region in the state.²⁸

Chart 1: The Region’s Workforce Shifted to Service Driven



Note: Data collected from the PA Department of Labor and Industry. (2018).

Today, 74% of the state's employees work in the private service sector, while only 14% produce goods; similarly, most of the region's employees work in service-related industries.²⁹

Certainly, this shift in regional employment distribution has resulted in varying, and in some cases expanding, job opportunities for employees. The region's employers, however, have remained in a precarious situation. To keep their doors open, businesses must fill open positions. Yet, too many employees don't have the skills needed for even the most basic requirements of today's highly complex entry level positions. To further complicate matters, entry-level credentials of some sectors are growing more complex all the time.



From 1990-2010, the region's blue-collar sector experienced a whopping 28% decline in jobs



In fact, the region's businesses openly express the disconnect between employer expectation and employee performance at even this level – only 37% of employers say that entry level employees possess skills essential to their jobs.³⁰

Because the skill set of the regions' applicant pool is misaligned with current business' needs, across industries, employers are recruiting and hiring employees that are inadequately primed for their jobs.

Businesses are Feeling the Effects of the Growing Skills Gap

Workforce concerns are not limited to specific industries, employee level or the Greater Philadelphia region; businesses are apprehensive about the quality of the state's labor pool across-the-board.

In fact, according to the 2016 Pennsylvania Chamber of Business and Industry's Workforce Development Survey of more than 400 employers across 16 industries:³¹

- + Only 1 out of 5 employers believed workers met PA businesses' needs; and
- + Nearly 3/4 of employers thought that interviewing job applicants were underqualified for their open positions.

Similarly, in the Greater Philadelphia region, when asked about the biggest obstacles their businesses face, employers expressed concern at all staffing levels; almost half of employers believed there were not enough qualified employees to fill mid-level positions, while nearly a third voiced the same concern about senior positions and more than half of employers stated that there were not enough qualified professional-level applicants.³²

Clearly, employers are expecting a more comprehensive set of skills than many workers have, and a large percentage of employers believe the local workforce lacks experience across all levels of employment.

Closing the skills gap in the workplace is costing Pennsylvania companies valuable time and resources. Half of the state's businesses estimate that they have lost between 50 to 500 hours of productivity to train or retrain new employees to gain necessary skills to do their jobs and are spending almost \$189 million annually to do so.^{33,34} Considering about 1/3 of the state's businesses are in Bucks, Chester, Delaware, Montgomery or Philadelphia counties, that may amount to more than \$60 million dollars in training costs for the region's employers every year.³⁵

Businesses' Demand For 21st Century Skills Will Continue to Grow

Projections for job growth statewide underscore the need for employees to enter the workforce with solid skills. Through 2024, it is estimated that more than half of Pennsylvania's 6.2 million available jobs will be "skilled jobs."³⁶

Philadelphia and its suburban counties are projected to be home to more than 1,116,000 of those skilled jobs.³⁷ Moreover, approximately 353,800 new and replacement jobs will require skills equivalent to or for applicants to possess an associate degree or higher.³⁸

Already, jobs requiring more training and complex skills are growing at a faster rate than low-skilled jobs (12.0% vs. 8.5%).³⁹ Specifically, science, technology, engineering and medical positions, which necessitate high entry-level skills, are growing much more rapidly than low and other high-skilled jobs.⁴⁰

Annual supply gaps are projected for software developers, computer programmers, registered nurses, dental hygienists, claims adjusters, engineers, researchers, mechanics and a host of other professions because the region lacks workers with adequate post-secondary coursework to fill the positions.⁴¹

To make matters worse, like the rest of the state, a key issue the region's businesses also face is replacing an aging workforce. Annually, in the five county southeastern Pennsylvania's region is gaining an estimated 19,500 people of retirement age.⁴² As they leave the workforce, they are taking their skills and institutional knowledge with them. Businesses in the region are undoubtedly feeling the impact of these departures.

In October 2018, there were an estimated 52,590 open skilled positions in Bucks, Chester, Delaware, Montgomery and Philadelphia Counties.⁴³



Workforce development initiatives are consistently proposed to train individuals to fill the workforce gaps. However, such measures cannot sufficiently meet the region's business hiring needs.

Even if the region could train all working-age underemployed and unemployed individuals today, only 8,942 positions would be filled.⁴⁴ That's a 43,650 person deficit.⁴⁵

To be clear, as the demands of the workplace become increasingly skill-focused, employers will continue to have difficulty finding skilled workers who can do the jobs their businesses need.

The only way to make sure that Greater Philadelphia has the skilled workforce its businesses need is to ensure that every year, all of the region's high school students graduate with strong skills.

Workforce Development and the Attainment of High-Level Skills Begins in the Classroom

Although every year a significant number of students enter as freshman, many don't graduate and far too many leave high school without being prepared. For just the graduating class of 2017, consider the following: of the more than 46,370 freshman who started high school in 2013, about 13,700 failed to master math or reading skills as 11th graders, and only about 39,000 graduated; if the 21,000 students who failed to graduate or left school unprepared would have had the foundational skills they needed, the region would have been 21,000 steps closer to filling the workforce gap.⁴⁶

Now, imagine that every entering freshman in 2014 graduated well-prepared in 2018 and that today's seniors all graduated with solid foundational skills to enter college, pursue a vocation or begin a career. The region's skilled workforce deficiency would be significantly lessened.

Developing a competent and highly skilled workforce starts the day a student enters a preschool classroom. In high-quality schools, at all levels, students learn academic skills but also how to think analytically, put forth effort to achieve goals, adapt to change and pay attention to detail – the very skills the region's employers ranked highest as essential skills they seek in employees.⁴⁷

Greater Philadelphia is uniquely positioned to nurture these co-dependent systems of schools and business. The region is home to more than 60 school districts and a significant portion of its prospective workforce begins their career development in local classrooms.

Of the more than four million people who live in Bucks, Chester, Delaware, Montgomery or Philadelphia counties, approximately 890,000 of these residents are children under the age of 18.⁴⁸ Ninety percent of these school-aged children attend or will attend a public school.⁴⁹ Upon graduation from high school and/or college, these students will enter a labor market that is increasingly reliant on complex and integrated skills.

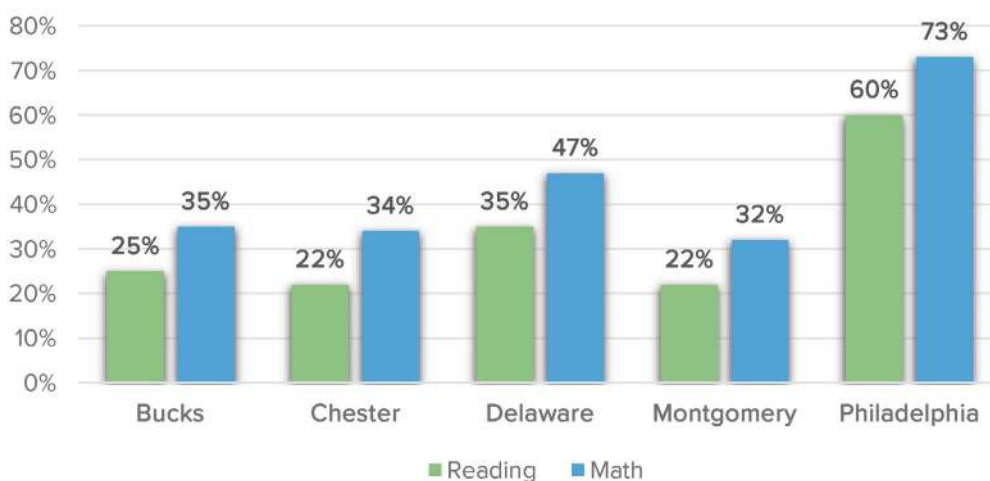
Unfortunately, far too many of SEPA's students are not on track to leave school with these solid foundational and marketable skills.

Thousands of SEPA Students Struggle to Obtain Proficiency in Basic Skills Such as Reading and Math

Annually, Pennsylvania students in 3rd through 8th grades take the Pennsylvania System of School Assessment (PSSA) which measures how they have mastered reading and math. Fourth and 8th graders also take the science PSSA. If a student gets a proficient or advanced score, the student is working on or above grade level. If a student receives a basic or below basic score, the student is struggling to grasp grade level work.

Many students have difficulty reaching proficiency as early as 3rd grade. When a child does not leave 3rd grade reading on grade level, they are four times more likely to leave high school without graduating than students that read proficiently.⁵⁰

Chart 2: At Least 25% of Third Graders Across the Region Are Not Prepared in Math and Reading



Note: Data collected from the Pennsylvania Department of Education. PSSA Results. (2017).

Yet, in 2017, 1 in 3 of the region's 3rd grade students did not read on grade level.⁵¹ That's not just an urban statistic; approximately 26% of test takers in the Bucks, Chester, Delaware and Montgomery counties failed to make the grade.⁵²

In math, at the regional level, 44% of students failed to reach proficiency.⁵³ In Philadelphia's four suburban counties, 37% struggled to master grade level work.⁵⁴

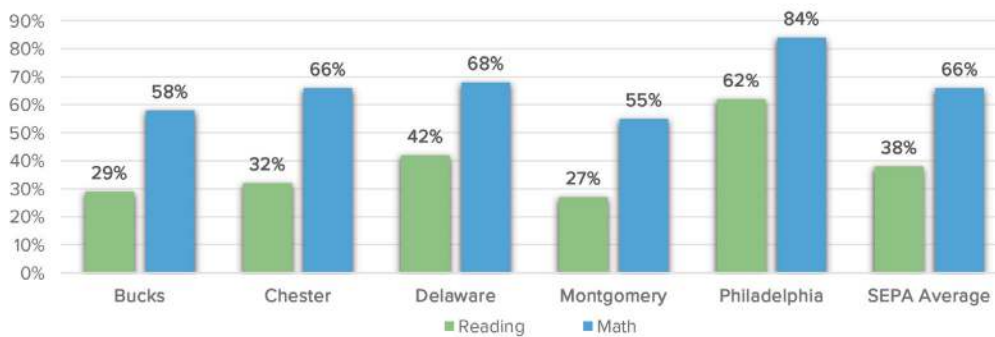
Basically, at least a quarter of suburban high school graduates aren't getting the education they need to succeed from the earliest grades and in Philadelphia the educational achievement gap is more pronounced.

Proficiency Levels Fall as Students' Work Becomes More Challenging

School doesn't get easier for students. As students move through the middle grades, mastering increasingly complex skills becomes difficult for more students. By the time students in the region get to 8th grade, their performance tends to decline.

In 2017, across the region, 38% of 8th grade students were not on grade level in reading, while 59% had not reached proficiency in math.⁵⁵

Chart 3: Too Many Southeast Pennsylvania Eighth Graders Are Not Prepared for High School



Note: Data collected from the Pennsylvania Department of Education. PSSA Results. (2017).

Although Montgomery County had the highest share of students reaching proficiency, even there 27% of students failed reading and 55% did not pass math.⁵⁶ Philadelphia County students fared much worse: 63% were not on grade level in reading, while 84% did not make the grade in math.⁵⁷

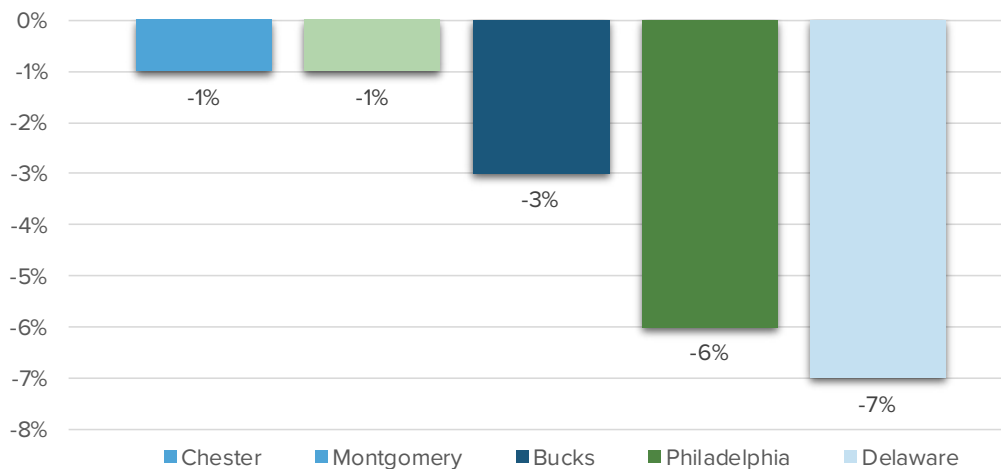
Consequently, at a time when students should be in the home stretch of their academic careers, many are stepping up to the plate and striking out.

Student Skills Vary through High School, Leaving Some Students Unprepared for Their Next Steps

While younger students take the PSSAs, older students take assessments at the end of their courses to test subject matter mastery. Between 2013 and 2017, across the region, the share of students who are passing high school graduation assessments declined.⁵⁸

Undoubtedly, this is movement in the wrong direction.

Chart 4: Year End Assessment Scores for High School Students in Reading and Math Are Declining



Note: Data collected from the Pennsylvania Department of Education. Keystone Results (2013-2017)

A Solid Investment Yields Tangible Results

The most efficient way to ensure that more students graduate prepared to meet the demands of the workforce is to give each student the foundational tools he or she needs to succeed before graduation. Research is clear; access to better resources leads to better results.

High-wealth school districts generally have a higher share of students who are academically performing on or above grade level.⁵⁹ For example, in 2017, in Delaware County, the Radnor school district spent about 64% more on instruction per student than Upper Darby did – a difference of about \$5,727 per student, or more than \$200,000 per classroom. Unsurprisingly, the share of students who passed the English PSSA was 87% higher, and a 175% higher share passed the Math PSSA. With respect to high school skills, a 45% and 72% greater share passed high school assessments of Literature and Algebra 1, respectively.⁶⁰

TABLE 1: DELAWARE COUNTY: DISTRICT EXPENDITURES AND STUDENT PROFICIENCY

| School District | Actual Instructional Expense per WADM | Students Passing English PSSA | Students Passing Math PSSA | Students passing Literature Keystone Exam | Students passing Algebra I Keystone Exam |
|-----------------|---------------------------------------|-------------------------------|----------------------------|---|--|
| Radnor Township | \$14,620 | 88.4% | 80.8% | 94.5% | 90.9% |
| Upper Darby | \$8,893 | 47.3% | 29.5% | 65.1% | 52.4% |

Similarly, in Montgomery County, Lower Merion spent about 64% more, or about \$7,255 per student - \$220,000 per classroom - on its students than the Pottstown School District did.⁶¹ It's no surprise that a significantly higher share of Lower Merion students mastered the material. In fact, the share of students in Lower Merion that passed the English PSSA was 73% higher and the Math PSSA was 147% higher. High school graduation tests in English were 69% higher and Algebra 1 scores were 104% higher in Lower Merion.⁶²

TABLE 2: MONTGOMERY COUNTY: DISTRICT EXPENDITURES AND STUDENT PROFICIENCY

| School District | Actual Instructional Expense per WADM | Students Passing English PSSA | Students Passing Math PSSA | Students passing Literature Keystone Exam | Students passing Algebra I Keystone Exam |
|-----------------|---------------------------------------|-------------------------------|----------------------------|---|--|
| Lower Merion | \$18,493 | 86.2% | 77.9% | 91.9% | 81.7% |
| Pottstown | \$11,238 | 49.8% | 31.6% | 54.5% | 39.8% |

In the case of Philadelphia, where less is available to educate students in the region, \$7,859 is spent on each student. Predictably, only 37% of 3rd through 8th graders read and 19% did math on grade level. Of high schoolers, only about half of the test takers, 49%, were proficient at reading while 42% had mastered math.⁶²

The examples above are not unique to the region. In fact, Pennsylvania has the greatest gap in spending between the high and low wealth school districts in the country. Unsurprisingly, the performance gaps among districts statewide are equally severe.

Certainly, school districts rely on a combination of federal, state and local funding to support their students. For some districts, this amounts to adequate funding. Well-funded districts can provide students with resources that support achievement, i.e. seasoned teachers, smaller class sizes, challenging school and access to tutors. Many school districts lack the funding to provide students with such options..

The Idea that Spending Money on Struggling Students is “Throwing Good Money After Bad” is a Myth

Just as undercapitalized businesses struggle to stay afloat, school districts without ample financing have difficulty providing students with the services and supports they need. One way to close the performance gap and ensure that the region’s students leave high school better prepared is to adequately fund all of their schools.

Undercapitalization is often viewed as a death knell for businesses, for good reason. Without enough capital businesses fail. Adequate financing allows entities to cover costs and remain solvent when business slows or profit margins are subpar. To stay afloat, undercapitalized businesses generally require an infusion of capital. Immediately.

Similarly, better education funding yields a good return on investment, especially for students that are, like underfunded businesses, struggling.

When student outcomes in 26 states that increased funding through finance reforms were compared to those in 23 states that didn’t, students residing in the poorest districts had significantly higher academic achievement and better long term outcomes when their school districts received more funding for their education from their home state, according to a study that looked at extensive data on school finance reform and student achievement.⁶³

Not only was there growth in individual test scores over time, an estimated \$1000 increase in per-pupil spending had the average effect of raising student test scores for at least a 10 year period.⁶⁴

Other research has shown that more per-pupil spending, particularly for poor students, leads to significant growth in “math, reading, science and social studies test scores for 4th and 8th grade students.”⁶⁵

For low income students, an annual increase in school funding translates into significant growth in high school graduation rates, higher earning potential, increased family income and a lower incidence of adult poverty.⁶⁶

Pennsylvania’s students experienced a similar boost from increased education funding. When the Commonwealth increased state education funding between 2003 and 2010, student gains were measurable. Districts receiving the largest increases boasted the greatest gains in student test scores. Specifically, the 50 districts with the greatest bump in state funding had a “55 percent increase in student test scores during that period.”⁶⁷

For students in Pennsylvania, a better investment in education is more than necessary – it is imperative. Pennsylvania ranks 46th in state contribution to education funding.⁶⁸

Like good businesses, good schools are efficiently run with lean administration. However, without greater capital – called “school funding” for public education – schools with limited resources, no matter how efficient or lean, cannot shrink class sizes or provide students with tools in the classroom that they need to learn 21st century job skills.

Ensuring That Students Consistently Have Access to Resources that Support High Quality Education Makes Sense (Cents)

According to a National Bureau of Economic Research report, the United States would realize a \$32 trillion gain in GDP if the lowest performing schools performed at a basic level, and up to a \$76 trillion gain if all state education systems were on par with the highest performers.⁶⁹

Closing the gaps in the Commonwealth would also have a significant economic impact. In fact, annual gains to Pennsylvania’s economy if the performance gaps among race-ethnicity or economic status were closed total between \$3 and \$5 billion dollars per group of same aged peers.⁷⁰ For our region, this could mean a gain of \$1 billion dollars.

In the alternative, failure to upgrade our region’s skills has a lasting significant impact on businesses’ bottom lines and weakens the state’s GDP.

Educational performance gaps cost Pennsylvania’s existing labor force a projected \$1 billion to \$3 billion in lost earnings or \$1 billion to \$2 billion in diminished GDP annually, according to research estimates from the Rand Corporation commissioned by Temple University’s Center for Regional Politics estimates.⁷¹

The research is clear: adequately investing in education translates into tangible, measurable results for students, for employers and for the economy.

Conclusively, to ensure that the region’s businesses have direct access to a skilled workforce, the region must collectively rethink - “what is the game plan?” The new game plan is simple: prepare students early and prepare them well.

A plan that invests in education from the beginning, closes the capital gap for schools, provides students with multiple pathways for success and ensures that each student reaches his or her potential will arm a greater number of workers with skills employers and their businesses desire.

The Game Plan

Adopt and implement three key strategies:

Take Advantage of Pre-K's Huge Return on Investment:

For every \$1 spent on high quality pre-k, there's a \$17 savings in returns and benefits.⁷² According to Dr. James Heckman, a Nobel Prize winner in economics and a preeminent scholar in economics of human development, for low income children, there's an even bigger return – every \$1 spent on high quality early childhood education yields a 13% ROI annually.⁷³

High-quality pre-k:

- + Enhances children's early reading, language development, math and social/emotional skills⁷⁴;
- + Cuts special education placements by almost half through 2nd grade⁷⁵;
- + Reduces the likelihood a child will repeat a grade by nearly a third through 8th grade⁷⁶; and
- + Makes students more likely to graduate from high school, attend college and enter the workforce with better skills and increases their purchasing power as consumers throughout their lifetimes.⁷⁷

Policy Recommendation

- + Increase the state's investment in pre-k so that every child in the region has access to a high-quality pre-k program.

Close the Capital (Funding) and Resource Gaps for Schools

Students who live in well-funded school districts have access to resources such as tutors for struggling students, librarians, guidance counselors, more honors and advanced placement classes, seasoned teachers, updated technology and a plethora of other support services that students in under resourced districts do not. Students from both types of districts will eventually enter the workforce with the skills they did or didn't acquire while in school.

Like businesses, school districts must live within their budgets and purchase resources. However, even the most efficient business or school district can't purchase resources if the funding available to do so is insufficient. In Southeastern Pennsylvania, schools are being short-changed by \$1.1 billion dollars.

To fill in that gap, the state would need to provide the region's schools with almost \$138 million more dollars every year for eight years, according to conservative estimates.⁷⁸ With this deficit, many districts are unable to provide their students with resources that have been demonstrated to enhance student performance.

Inadequate funding impacts students at all levels and with varying abilities. One in six Pennsylvania students receives special education services. Because of funding shortages, students in one school are receiving services that give them the additional support they need to enter the workforce with stronger skills while students attending another school, in some cases blocks away, do not. Special education is supported by a mix of federal, state, and local funding. However, because state funding has not kept pace with the costs of educating these students, school districts are increasingly relying on local resources to provide students with services.

In fact, between 2008 to 2016, while the state increased its special education spending by \$72 million⁷⁹, school districts saw special education costs rise by \$1.54 billion.⁸⁰

At the local level, school districts are left to cover the remaining costs, often leaving students in need of services without them and the pot of school funding for a majority of public school students – those without special needs – to be further divided to cover the costs.

Better funding for all of the region's schools will enable the Southeast to level its students' skills up.

When that happens, these new workers can enter the workforce with the strong foundational skills to enable them to more easily acquire complex skills and as a result successfully seek promotions and meet the growing demand among employers for talented supervisors and managers.

Policy Recommendation

- + Follow Pennsylvania's Basic Education Funding Commission's recommendations, ensure that basic education funding is distributed in accordance with the funding formula adopted by the legislature and fully fund the formula.
- + Encourage students to take challenging courses, including AP and Honors classes in middle and high school to better prepare them for the rigors of college and their careers.
- + Increase state funding for school districts that have consistent, severely inadequate resources for students.

Policy Recommendation (cont)

- + Foster business and school district partnerships that educate students about career paths, internships, work site visits, certifications and post-graduate opportunities.
- + Increase state education funding for students receiving special education services.

Optimize Career and Technical Education (CTE) Infrastructure

Many students opt to begin hands-on training for their careers while still in school. Robust Career and Technical Education (CTE) prepares students for successful careers and lifelong learning through the acquisition of hands-on higher-level skills and knowledge.

In fact, high quality CTE programs prepare students for careers and college should students choose to attend.

Significantly, while the average national graduation rate is 80%, the average rate for students concentrating in CTE programs is 93%.⁸¹ Moreover, 91% of high school graduates who earned 2-3 CTE credits enroll in college.⁸²

Policy Recommendation

- + Remove financial barriers at the district level for CTE programs.
- + Encourage businesses to partner with CTE programs to expose students to varying professions a career paths within industries.
- + Support programs that offer graduation and certification.

Unfortunately, far too few students have access to high quality CTE programs. 90% of CTE funding comes from school districts, while only 10% comes from state and federal resources.⁸³ Consequently, students in many districts – including those that are undercapitalized – lack opportunities to engage in CTE programs.

Conclusion

Obviously, the purpose of education is not simply to produce workers, but generations of well-rounded adults who contribute their talents to society. Unfortunately, while today's students may be able to operate the latest iPhone, many have not received an education that aligns with skills businesses want and need. However, if more students from Southeastern Pennsylvania graduated from high school with solid foundational skills, the likelihood that they will mature into adults who can earn a decent living, support families, and begin their careers equipped to do their jobs well will be significantly greater.

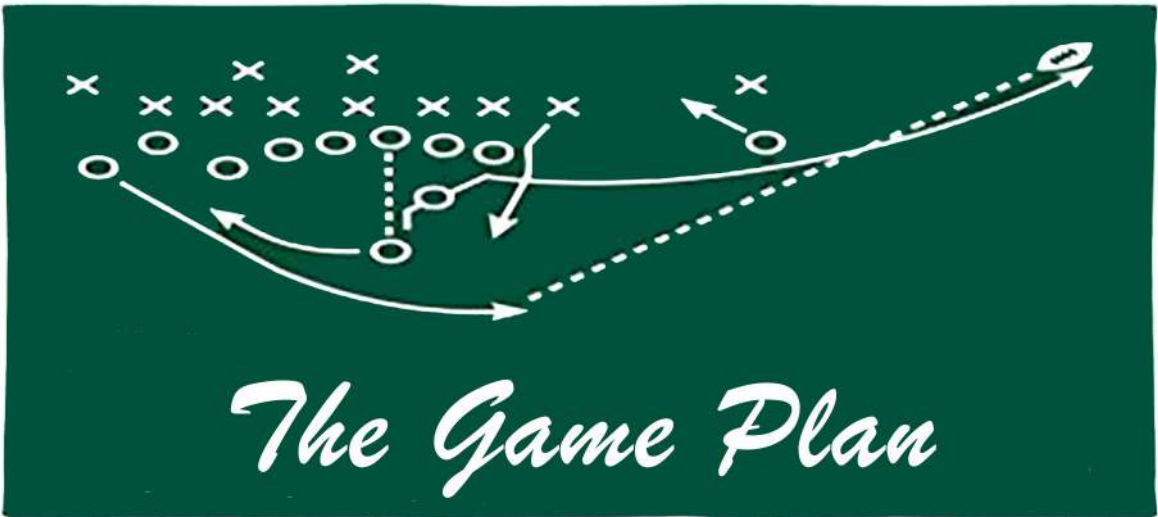
If only 21% of businesses believe the workforce is good or excellent at meeting its needs, it's time for a different game plan – a plan that gets significantly more students off the bench and onto the field to play competitively.

In his research, Paul Romer, Ph.D., the 2018 Nobel Prize winner in Economics, concludes that all significant progress requires “conditional optimism” – the idea that throughout human history, particularly in the industrial revolution, true progress has never come from sitting idly by waiting for it to happen; it requires humans to take deliberate significant action.⁸⁴

Similarly, the winning strategy to fill the dearth of skilled workers and region's labor force requires not complacency, but intentional efforts to give all Southeastern Pennsylvania students the resources they need to become skilled employees.

To remain the projected frontrunner of Pennsylvania's economy, Greater Philadelphia businesses must recruit skilled talent that can competently perform the tasks their professions and occupations require. The most sustainable, cost-effective and efficient way to produce a dominant workforce that meets or exceeds employer expectations is to ensure that the pipeline of pre-k to 12th grade students graduate from high school with a strong set of foundational skills.

If the region makes the case that the state must invest in high-quality education for its 890,000 students early, provide adequate funding to support their schools, fund hands-on programs for career and tech savvy students, and develop programs that enable all students to maximize their potential, the state and this region will not only continue to support the state's overall economic performance, it will also set our region up to compete more effectively to attract and retain growing companies – and that's the ticket to winning this game.



The Game Plan

Endnotes

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5. Econsult Solutions. The Impact of Insufficient Retirement Savings on the Commonwealth of Pennsylvania. January 25, 2018. Retrieved from <https://patreasury.gov/pdf/Impact-Insufficient-Retirement-Savings.pdf>

Methodology: On page 28, the Econsult Report indicates that from 2015-2030, the number of elderly persons in Pennsylvania age 65 and above is expected to grow from 2,179,000 to 3,093,000 – an increase of 914,000 elderly people statewide. That's an increase of about 60,933 people who are at or over the age of retirement, a year, every year for the next 15 years.

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Methodology: The total online job postings by county for December 2018: Bucks (9,377), Chester (11,803), Delaware (9,695), Montgomery (27,074) and Philadelphia (39,442) Counties were summed totaling 97,391 positions job postings in the region. According to estimates from the Pennsylvania State System for Higher Education (PASSHE), approx. 54% of PA's jobs are skilled. (See <http://www.passhe.edu/inside/bog/Workforce%20Gap%20Analysis/West%20Chester%20Gap%20Analysis.pdf>) Considering this, there are an estimated 52,591 skilled posted open positions in the region.

9. US Bureau of Labor Statistics, Local Area Unemployment Statistics. Nov 2018; US Census Bureau, 2017 American Community Survey 1-Year Estimates, Table S1501; and The Center for Workforce Information & Analysis. Generated January 2019. Calculated using data retrieved from: https://www.bls.gov/news.release/archives/laus_12212018.pdf; <https://www.bls.gov/lau/stalt.htm>; <https://www.bls.gov/cps/>; <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>; and <https://www.workstats.dli.pa.gov/pages/default.aspx>.

Methodology: As of November 2018, there were 6,457,667 individuals in the PA Civilian Labor Force. The US Bureau of Labor and Statistics includes percentages for six designations of individuals who are unemployed or underemployed. U-6 includes the total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force. In November 2018, 8.4% of Pennsylvania's workforce had a U-6 classification, for an estimated total of 542,444 people. To determine the share of U-6 employees residing in Bucks, Chester, Delaware and Montgomery Counties, we applied the percentage of individuals from the counties in Pennsylvania's civilian workforce, 32%, to the number of U-6 designated individuals statewide for a total of 173,582. To ascertain how many of the employees were working age individuals, we utilized categorical age data from the Pennsylvania Current Population Survey (CPS) Labor Force Data by Select Age Group, Center for Workforce

Information & Analysis from January 14, 2019 (12-Month Average Ending in the Reference Month: July - December 2018). Using the information, approx. 11.2% of the unemployed labor force was between 20 and 54 years old in November 2018 for a total of approx. 19,441 people in the region who were unemployed and underemployed. Finally, to determine whether the individuals in this category likely had at least some college credits up to bachelor level credentials we pulled data from the US Census Bureau and the SE PA Region defined as Bucks, Chester, Delaware, Montgomery, and Philadelphia counties. About 46% of individuals in the region have some college through bachelor level credentials. Of the 19,441 individuals, only 8,942 fell into the category of being working age and likely to be qualified for skilled positions.

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Methodology: The number of employed people from each county was divided by the total number of employed people in the state to generate the percentage of individuals employed in Bucks, Chester, Delaware, Montgomery or Philadelphia Counties in comparison to that of the state.

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17. CEO Council for Growth. Greater Philadelphia Regional Labor Market Survey Results. October 2015. Retrieved from <http://legacy.chamberphl.com/download/public/regionallabormktreport-web.pdf> CEO Council for Growth defines the Greater Philadelphia region as an 11-county region across northern Delaware, southern New Jersey and southeastern Pennsylvania including Bucks, Chester, Delaware, Montgomery or Philadelphia Counties.

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Methodology: Estimates considered the number of 9th grade students enrolled in Bucks, Chester, Delaware, Montgomery and Philadelphia Counties as of October 1, 2013. Approximately, 46,370 students were enrolled in Southeastern Pennsylvania as 9th graders comprising the 2013-2014 entering freshman class.

These student's Keystone Test scores in algebra 1 (math) and literature (reading) was recorded in 2016, when the students were 11th graders. Of the 36,871 students who took the test, 15,854 or 44% failed to reach proficiency and obtained a score of basic or below basic. Of the 36,768 students, approximately 11,729 or 32% failed to reach proficiency and obtained a score of basic or below basic.* The number of test takers and test scores of students from Middle Bucks Institute of Technology, Upper Bucks Co AVTS, Widener Memorial, Esperanza Cyber CS, Western Montgomery CTC and Eastern Center for Arts and Tech were omitted as 10 or fewer students took the test at each school and the scores were not reported in the PDE data.

Finally, the number of students graduating should reflect the same group of students as graduating seniors. Approximately, 39,052 students graduated in 2017. It is thus estimated that 7,318 students did not graduate. If the number of students who were not proficient at reading or math, is averaged, that's approximately 13,791 students. The estimated number of students who could become skilled workforce entrants, but failed to do so, is the number of students who did not graduate plus the average number of the students who were not proficient – about 21,109.

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Methodology: On page 28, the Econsult Report indicates that from 2015 – 2030, the number of elderly persons in Pennsylvania age 65 and above is expected to grow from 2,179,000 to 3,093,000 – an increase of 914,000 elderly people statewide. That's an increase of about 60,933 people who are at or over the age of retirement, a year, every year for the next 15 years. Considering about 32% of the population resides in Bucks, Chester, Delaware, Montgomery and Philadelphia Counties, about 19,498 in the region meet this criteria.

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Methodology: The total online job postings by county for December 2018: Bucks (9,377), Chester (11,803), Delaware (9,695), Montgomery (27,074) and Philadelphia (39,442) Counties were summed totaling 97,391 positions job postings in the region. According to estimates from the Pennsylvania State System for Higher Education (PASSHE), approx. 54% of PA's jobs are skilled. (See <http://www.passhe.edu/inside/bog/Workforce%20Gap%20Analysis/West%20Chester%20Gap%20Analysis.pdf>) Considering this, there are an estimated 52,591 skilled posted open positions in the region.

44. US Bureau of Labor Statistics, Local Area Unemployment Statistics. Nov 2018; US Census Bureau, 2017 American Community Survey 1-Year Estimates, Table S1501; and The Center for Workforce Information & Analysis. Generated January 2019. Calculated using data retrieved from: https://www.bls.gov/news.release/archives/laus_12212018.pdf; <https://www.bls.gov/laus/statl.htm>; <https://www.bls.gov/cps/>; <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>; and <https://www.workstats.dli.pa.gov/pages/default.aspx>.

Methodology: As of November 2018, there were 6,457,667 individuals in the PA Civilian Labor Force. The US Bureau of Labor and Statistics includes percentages of for six designations of individuals who are unemployed or underemployed. U-6 includes the total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers. In November 2018, 8.4% of Pennsylvania's workforce had a U-6 classification, for an estimated total of 542,444 people.

To determine the share of U-6 employees residing in Bucks, Chester, Delaware and Montgomery Counties, we applied the percentage of individuals from the counties in Pennsylvania's civilian workforce - 32% to the number of U-6 designated individuals statewide for a total of 173,582. To ascertain how many of the employees were working age individuals, we utilized categorical age data from the Pennsylvania Current Population Survey (CPS) Labor Force Data by Select Age Group, Center for Workforce Information & Analysis from January 14, 2019 (12-Month Average Ending in the Reference Month: July - December 2018). Using the information, approx. 11.2% of the unemployed labor force was between 20 and 54 years old in November 2018 for a total of approx. 19,441 people in the region who were unemployed and underemployed. Finally, to determine whether the individuals in this category likely had at least some college credits up to bachelor level credentials we pulled data from the US Census Bureau and the SE PA Region defined as Bucks, Chester, Delaware, Montgomery, and Philadelphia counties. About 46% of individuals in the region have some college through bachelor level credentials. Of the 19,441 individuals, only 8,942 fell into the category of being working age and likely to be qualified for skilled positions.

45. Ibid.

Methodology: The 8,942 working age and skilled individuals from endnote 44 above was subtracted from the number of open skilled positions in endnote 43 above to estimate the gap of 43,649 workers.

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Methodology: Estimates considered the number of 9th grade students enrolled in Bucks, Chester, Delaware, Montgomery and Philadelphia Counties as of October 1, 2013. Approximately, 46,370 students were enrolled in Southeastern Pennsylvania as 9th graders comprised the 2013-2014 entering freshman class.

These student's Keystone Test scores in algebra 1 (math) and literature (reading) was recorded in 2016, when the students were 11th graders. Of the 36,871 students who took the test, 15,854 or 44% failed to reach proficiency and obtained a score of basic or below basic. Of the 36,768 students, approximately 11,729 or 32% failed to reach proficiency and obtained a score of basic or below basic.* The number of test takers and test scores of students from Middle Bucks Institute of Technology, Upper Bucks Co AVTS, Widener Memorial, Esperanza Cyber CS, Western Montgomery CTC and Eastern Center for Arts and Tech were omitted as 10 or fewer students took the test at each school and the scores were not reported in the PDE data.

Finally, the number of students graduating should reflect the same group of students as graduating seniors. Approximately, 39,052 students graduated in 2017. It is thus estimated that 9,602 students did not graduate. If the number of students who were not proficient at reading or math, is averaged, that's approximately 13,791 students. The estimated number of students who could become skilled workforce entrants, but failed to do so, is the number of students who did not graduate plus the average number of the students who were not proficient – about 23,393.

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Public Citizens for Children and Youth (PCCY) serves as the leading child advocacy organization working to improve the lives and life chances of children in the region.

Through thoughtful and informed advocacy, community education, targeted service projects and budget analysis, PCCY watches out and speaks out for children and families. PCCY undertakes specific and focused projects in areas affecting the healthy growth and development of

children, including child care, public education, child health, juvenile justice and child welfare.

Founded in 1980 as Philadelphia Citizens for Children and Youth, our name was changed in 2007 to better reflect our expanded work in the counties surrounding Philadelphia. PCCY remains a committed advocate and an independent watchdog for the well-being of all our children.

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