

**RESEARCH BRIEF**

# Help Wanted

*June 2009*



# Research Information Brief: Literacy Challenges of the Adult Residents of Philadelphia City

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## Philadelphia's Dynamic Economy

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Philadelphia's economy transformed over the last 35 years. In 1970, one in four residents worked in manufacturing. Today less than one in twenty Philadelphian workers have jobs in manufacturing. The bulk of work opportunities in Philadelphia require knowledge skills – that is, skills related to communicating important information through speaking, reading, and writing – often via a computer. Growing occupations group around service occupations and managerial and professional specialty occupations. Even without the change in the mix of jobs available in Philadelphia, jobs today require different skills than they did 35 years ago. For example, manufacturing businesses tend to be smaller and require workers on the production line to process information from digital readouts, be decision-makers and perform as team players. This shift in work and ways of working creates a need for employees with higher levels of literacy skills, skills centered on knowledge collection, problem solving, and dissemination. Residents without these skills have difficulty maintaining employment in the city's economy. Employers with more traditional lower-wage jobs requiring fewer knowledge skills still report the need for workers who can read and interpret safety information, as well as, communicate with fellow workers. The transformation of work from a set of specific skills to broader more flexible skills is moving very rapidly. Expectations of employers have risen for entry-level workers giving the competitive edge to job seekers in the labor market who can offer a higher level of literacy skills. The rise of greater literacy skill requirements for work counters the decline in manufacturing employment in Philadelphia depicted below in Chart 1.

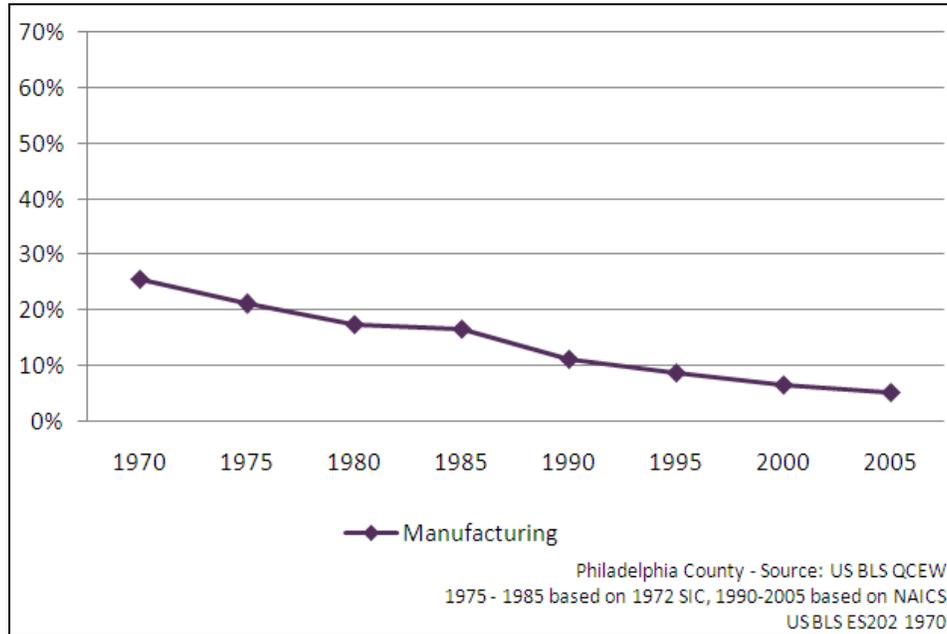
## The Economic Results of Literacy Skills

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To find and hold a job requires the skills, abilities, and knowledge to be productive in the workplace. Employers demand what is needed to grow their business in a global and shifting national economy. The economic growth of a city is closely linked with the skills, abilities, and knowledge of the available labor market. As Philadelphia moves into an information-driven economy, the gap between the needs of employers and the skills and abilities of the working-age residents of Philadelphia

**CHART 1**

*Changes in the Percentage of Manufacturing Employment 1970 to 2005*



widens. The literacy proficiencies of Philadelphians are below those of similar aged populations in the surrounding Pennsylvanian suburban communities, in the Commonwealth of Pennsylvania, and in the nation. Not only is business growth affected by lower literacy proficiencies, but opportunities diminish for those participating in the workforce. Workers without the skill to learn on-the-job are being left behind at a faster rate as jobs require more flexible workers, able to adapt as job requirements shift. The resulting low attachment to the mainstream workforce has profound implications for families, as well as the city as a whole.

Recent research by the Center for Labor Market Studies clarified the gaps between the literacy proficiencies needed for business growth and those of the resident working-age population. This research articulates the differences in the needs of businesses located in Philadelphia, the literacy abilities of the resident working-age population and the need for suburban workers to fill the gaps. The findings of this study build on our qualitative conversations with employers, with adult literacy providers and with organizations supplying job placement services in the public workforce system. The Philadelphia Workforce Investment Board along with all our partners seeks to better align Philadelphia residents' literacy skills with job opportunities.

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## What is literacy?

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***What is literacy?*** Literacy is “using printed and written information to function in society, to achieve one’s goals, and to develop one’s knowledge and potential” according to the National Assessment of Adult Literacy. The literacy proficiencies of the population are a key determinant of the quality of the workforce and are found to have a close positive association with economic growth and living standards. Across the board, the growing literacy requirements for effective participation in today’s economy and society lead to limitations in the opportunities of individuals with low literacy levels. The demand for higher literacy and skill levels are expected to continue to increase resulting in a widening of the gap between the economic fortunes of less literate populations and those with higher literacy proficiencies.

***How is literacy measured?*** The National Assessment of Adult Literacy, conducted in 2003, split literacy into three domains: prose literacy, document literacy, and quantitative literacy. Literacy skills are divided into four levels: below basic, basic, intermediate, and advanced. Nationally, of the representative sample of work-age persons who took the survey, scores were highest for prose literacy and lowest for quantitative literacy.

***Prose literacy*** is a measure of skills using information presented in textural format such as editorials, news stories, brochures, and instructional materials. It refers to the knowledge and skills needed to perform such tasks as searching, comprehending, and using written information in block or paragraph form. Basic prose literacy requires that a reader pick out a requested piece of information from a paragraph. Higher levels of prose literacy require relating the selected information with other ideas in the paragraph.

***Document literacy*** reflects the skill in using information presented in graphs, figures, charts, or tables. It refers to the knowledge and skills necessary to search, comprehend, and use written information not arrayed in block or paragraph form (non-continuous text). Examples of document literacy include completing job applications and interpreting payroll forms, maps, transportation schedules, tables, and drug or food labels. Basic document literacy requires processing written language both horizontally and vertically to find a fact. More advanced document literacy requires comparing facts located in different places on the document.

**Quantitative literacy** is a measure of the skill identifying the correct mathematical operation and performing the arithmetic operations on numbers presented in text or other document formats. It refers to the knowledge and skills required to perform quantitative tasks like identifying appropriate mathematical operations and performing the computations, either alone or sequentially, using numbers embedded in printed materials. Examples of quantitative literacy skills include balancing a checkbook, computing a tip, totaling an order form, or determining the amount of interest on a loan from information in an advertisement. More advanced quantitative literacy requires the use of multiple operators to calculate an answer, such as, totaling an invoice and then calculating the sales tax on the total.

**Why should we care about literacy levels in Philadelphia?** Literacy levels are closely associated with labor force participation and employment. Nationally, those who are employed have higher literacy levels than those who are unemployed. Those not participating in the labor force have the lowest levels of literacy. The labor force attachment of the working-age population in Philadelphia is weak, pointing to lower levels of literacy proficiencies among the city's workforce compared to the surrounding suburbs, the Commonwealth of Pennsylvania, and the nation. Low literacy skills can act as brake on the economic prosperity in the city and the region. Economic development is heavily dependent on the quality of the resident workforce. Economic development builds the wealth of neighborhoods, develops secure families, and creates more comprehensive city services. Without human capital investments in raising levels of literacy in Philadelphia doubts emerge about the city's ability to attract businesses, to increase employment opportunities for the city's residents, and to raise earnings and living standards.

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## Methodology of Center for Labor Market Research Study on Literacy Proficiencies

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**How are the national results applied to Philadelphia?** The National Assessment of Adult Literacy administered a survey to a nationally representative sample of 19,300 working-age adults 16 years old and older. Specific information for Pennsylvania and Philadelphia were not collected. To get results for Philadelphia, the Center for Labor Market Studies created a simulation using national results and applying these to subpopulations of the city defined by age, gender and ethnicity as found in the 2005 American Community Survey of the U.S. Census Bureau. The simulation uses national mean scores weighted by the subpopulations residing in Philadelphia of those 16 years and older. In all, four age groups, four ethnic groups, and two genders resulted in 32 weights applied to groups of

residents that produced literacy scores for Philadelphia. The same process was used to simulate scores for the surrounding suburbs and for Pennsylvania. The scores were then grouped into the nationally defined four literacy levels: below basic, basic, intermediate, and advanced.

***Why use age, gender, and ethnicity to define weights for the simulation?*** Findings from the National Assessment of Adult Literacy show differing results by age, gender, and ethnicity. Mean scores for women are higher than those of men on prose literacy and document literacy measures, but lower on quantitative literacy measures. A larger share of women scored in the top two levels of prose literacy and document literacy measures. One in six men scored at the advanced level in the quantitative literacy measure compared to one in nine women. Likewise, age impacted scores on the three literacy measures. Scores on all three literacy measures were highest for the 25 to 39 years old age group. Quantitative scores were lowest for those 50 years old and older and for the 16 to 24 years old age group. Finally, different ethnic groups had clear differences in their literacy scores. The mean literacy scores of Latino respondents and African American respondents are considerably lower than for white respondents in each of the three literacy areas. Latino respondents had the lowest score and the most difficulty with the prose literacy measure, perhaps because English was not the first learned language. Those grouped into the remaining ethnic category scored above African Americans and Latino respondents but below whites participating in the assessment. The ethnic composition of the Philadelphia working-age population reveals higher shares of groups with lower literacy levels. About 58% of Philadelphia's population is non-white compared to 15% in the suburbs and in Pennsylvania.

***How are literacy levels required by different industries and occupations determined?*** One goal of the research completed by the Center for Labor Market Studies is to compare the literacy proficiencies of the Philadelphia's workforce with the literacy proficiencies required to work in different industries and the associated occupations prominent in the Philadelphia economy. The 2003 National Assessment of Adult Literacy survey includes information on occupations (the skills, abilities and knowledge needed for a job) and on industries (major classifications of the kind of product produced). Mean literacy scores vary widely by occupations. Mean scores across industries are less variable because there are many different occupations represented in a single industry. For example, hospitals employ some of the most literate workers as physicians and technicians and also workers with much lower literacy proficiencies who work as building and grounds cleaning and maintenance staff. The Center for Labor Market Studies estimated required literacy scores for occupations and industries using national mean scores. These

were then compared with the simulated literacy scores (described above) developed for Philadelphia, the surrounding Pennsylvania suburbs and Pennsylvania as a whole.

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## Findings from the Center for Labor Market Studies' Simulation

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***What are the literacy levels in Philadelphia?*** A comparison of the literacy levels in Philadelphia, the suburbs, the state, and the nation reveals that working-age residents of Philadelphia City have the lowest level of literacy of these geographic regions. On the prose and document scales, almost one-fifth of the city's working age population (between 197,000 and 205,000 residents) has Below Basic levels of literacy. One-third of the city's working-age population (347,000 residents) had Below Basic levels of quantitative literacy. Over 50% of all Philadelphia residents 25 years and older have Basic Prose literacy scores or below, 45% have Basic or below Document literacy proficiency, and 65% are at Basic levels or below in Quantitative literacy. Individuals with Below Basic levels of literacy are able to perform only the simplest of tasks and are likely to face substantial barriers in the labor market. Those with Basic levels of literacy proficiencies have difficulty advancing their careers in an increasingly information-driven economy.

**TABLE 1***Simulated Distribution of the Working-Age Population by Literacy Levels, 2005*

	Below Basic	Basic	Intermediate	Advanced	Total
<b><i>Prose</i></b>					
U.S (2003)*	13.60%	28.80%	42.40%	15.30%	100%
Pennsylvania	10.80%	27.10%	47.80%	14.20%	100%
Philadelphia Suburbs	10.30%	27.00%	48.30%	14.40%	100%
Philadelphia City					
Percent	19.00%	33.20%	39.10%	8.70%	100%
Number	204,980	358,895	422,188	93,642	107,970,400
<b><i>Document</i></b>					
U.S (2003)*	12.40%	22.40%	52.60%	12.60%	100%
Pennsylvania	10.80%	21.10%	55.00%	13.00%	100%
Philadelphia Suburbs	10.40%	20.90%	55.50%	13.20%	100%
Philadelphia City					
Percent	18.30%	26.60%	47.10%	8.00%	100%
Number	197,826	286,909	508,971	85,998	107,970,400
<b><i>Quantitative</i></b>					
U.S (2003)*	21.50%	32.70%	32.50%	13.40%	100%
Pennsylvania	18.20%	32.20%	35.20%	14.40%	100%
Philadelphia Suburbs	17.50%	32.20%	35.70%	14.70%	100%
Philadelphia City					
Percent	32.20%	33.20%	26.00%	8.60%	100%
Number	347,373	358,994	280,431	92,906	107,970,400

\* Actual data from the 2003 National Assessment of Adult Literacy

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy, Public Use Data Files, tabulations by the Center for Labor Market Studies

The first chart (Chart 2) below graphically illustrates Table 1 (above). The chart visually depicts the simulated 2005 levels of literacy in the city and shows residents falling behind their counterparts in the suburbs, the Commonwealth, and the nation. This disparity in results for the city compared to other geographic regions is the result of a long-term failure to invest in preparing workers for the jobs available today and for the future.

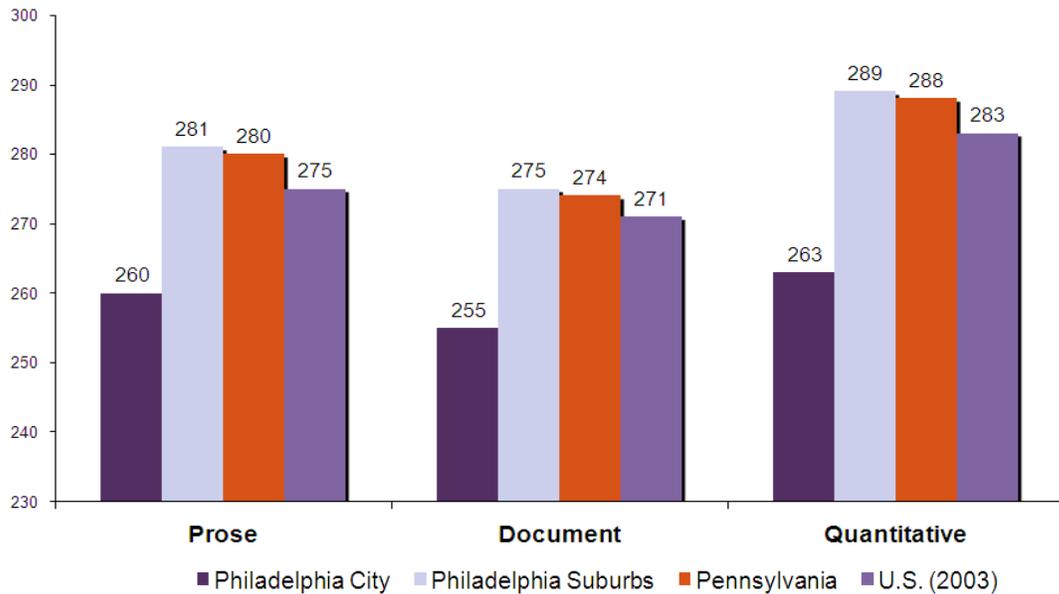
*Philadelphia is lagging behind the surrounding suburbs, the state, and the nation in literacy proficiencies.*

The second chart (Chart 3) depicts the trend in literacy levels of the working age population of Philadelphia between 1990, 2005, and 2030. The simulation from the model starkly reveals that if there is no increase in investment in adult literacy in Philadelphia then literacy proficiencies will fall over time for the city's working-age population. This decline will take place as the workplace

demands higher levels of literacy skills to match the shift towards information and knowledge oriented industry needs. Over the time period between 1990 and 2030, the literacy proficiencies of the city’s population are expected to decrease sharply. The chart depicts the changes in literacy levels across the three measures of literacy and over the time periods: 1990, 2005, and 2030.

**CHART 2**

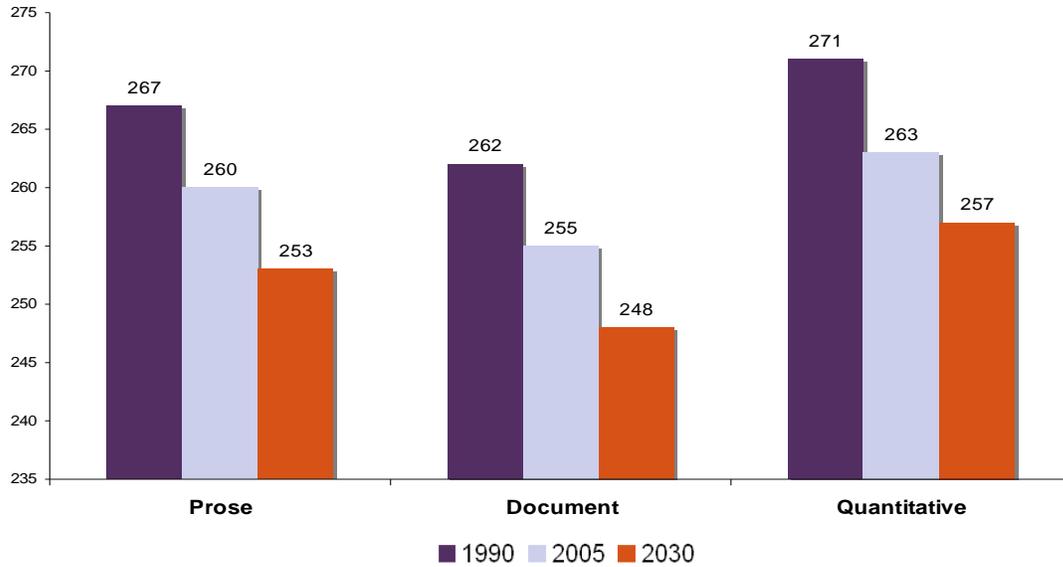
*Prose, Document, and Quantitative Literacy Scores of Adults (16 years of Age and Older) in Philadelphia City, Philadelphia Suburbs, Pennsylvania (Simulated 2005), and U.S. (Actual NAAL 2003)*



Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy, Public Use Data Files, tabulations by the Center for Labor Market Studies

**CHART 3**

*Simulated Prose, Document, and Quantitative Literacy Scores of Adults (16 years of Age and Older) Philadelphia City, 1990, 2005, & 2030*



Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy, Public Use Data Files, tabulations by the Center for Labor Market Studies

**What are the required literacy levels by occupations?** Literacy levels vary dramatically by occupation. People in science, engineering, computer and math, and legal occupations scored the highest in literacy proficiencies. Workers in construction, transportation, food processing, building and grounds maintenance, and farming occupations scored the lowest in literacy proficiencies in the 2003 national survey.

**TABLE 2**

*Mean Prose, Quantitative, and Document Literacy Scores by Major Occupation, U.S. 2003 (Ranked in Descending Order by Mean Score on the Prose Literacy Scale)*

Major Occupation	Prose	Quantitative	Document
<b>Mean score</b>	275	283	271
<b>Standard deviation</b>	59	61	57
<b>Life, physical, &amp; soc. science technicians</b>	<b>336</b>	<b>348</b>	<b>328</b>
Life & physical scientists	333	343	314
<b>Architects, engineers, &amp; surveyors</b>	<b>331</b>	<b>351</b>	<b>312</b>
Computer & math occupations	329	338	311
<b>Legal occupations</b>	<b>326</b>	<b>327</b>	<b>331</b>
Social scientists & related workers	321	333	316
<b>Teachers</b>	<b>317</b>	<b>322</b>	<b>309</b>
Health diagnosing & treating practitioners	317	320	303
<b>Media &amp; communications</b>	<b>317</b>	<b>323</b>	<b>297</b>
Community & social services occupations	315	311	301
<b>Drafters, engineering &amp; mapping techs</b>	<b>314</b>	<b>335</b>	<b>315</b>
Management occupations	306	319	295
<b>Business &amp; financial operations occupations.</b>	<b>305</b>	<b>321</b>	<b>303</b>
Librarian, curator, archivist, & miscellaneous education occupations	301	299	287
<b>Artists, entertainers, performers, sports, &amp; related occupations</b>	<b>293</b>	<b>297</b>	<b>289</b>
Protective service occupations	291	290	278
<b>Entertainment attendants &amp; related workers</b>	<b>288</b>	<b>272</b>	<b>271</b>
Office & administrative support occupations	287	293	283
<b>Sales &amp; related occupations</b>	<b>280</b>	<b>293</b>	<b>281</b>
Installation, maintenance, & repair occupations	279	294	280
<b>Healthcare techs &amp; support occupations</b>	<b>277</b>	<b>276</b>	<b>270</b>
Personal care & service occupations	267	266	260
<b>Food prep. &amp; serving related occupations</b>	<b>263</b>	<b>264</b>	<b>264</b>
Philadelphia 2005 Simulated Literacy	260	255	263
Production occupations	256	269	254
<b>Construction &amp; extraction occupations</b>	<b>255</b>	<b>265</b>	<b>250</b>
Trans. & material moving occupations	252	263	250
<b>Food processing workers</b>	<b>246</b>	<b>253</b>	<b>246</b>
Building/grounds cleaning & maintenance occupations	230	241	233
<b>Farming, fishing, &amp; forestry occupations</b>	<b>218</b>	<b>250</b>	<b>226</b>

*Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy, Public Use Data Files, tabulations by the Center for Labor Market Studies.*

***How do the literacy proficiencies of Philadelphians measure up to the composition of occupations found in the city economy?*** The distribution of occupations

found in businesses located within the city’s boundaries concentrates more in higher levels of literacy proficiencies. More than 1 in 3 jobs (38%) located in the city require literacy levels at the mid-

intermediate level to advanced level of literacy proficiencies. Another 36% of jobs require intermediate to mid-intermediate levels of literacy proficiency.

*More than two-thirds of jobs located in Philadelphia require intermediate levels of literacy proficiency or above (shaded below) while less than 50% of Philadelphia residents have sufficient literacy skills to capture these jobs.*

**TABLE 3**

*Percentage Distribution of Jobs by Major Occupation, 2005 (Ranked in Descending Order by Mean Score on the 2003 NAAL Prose Literacy Scale)*

Major Occupation	Philadelphia			Ratio (A)/(B)	Mean
	City	Suburbs	PA		
Total number of jobs	0.554 m.	1.063 m.	5.446 m.		
Total (mean prose score 301 or higher)	38.80%	35.30%	31.40%	1.1	
Life, physical, & social science techs.	0.40%	0.20%	0.30%	1.897	336
Life and physical scientists	0.70%	0.90%	0.50%	0.788	333
Architects, engineers, and surveyors	0.90%	1.60%	1.30%	0.583	331
Computer & mathematical occupations	2.50%	3.10%	2.20%	0.806	329
Legal occupations	2.50%	1.00%	1.10%	2.423	326
Social scientists & related workers	0.50%	0.40%	0.20%	1.384	321
Teachers	5.70%	4.80%	4.70%	1.187	317
Health diagnosing & treating	6.30%	4.10%	4.30%	1.541	317
Media and communication	1.10%	0.80%	0.70%	1.351	317
Community & soc. services occs.	2.90%	1.60%	2.00%	1.776	315
Drafters, engineering, & mapping tech.	0.40%	0.50%	0.50%	0.909	314
Management occupations	8.50%	10.40%	8.70%	0.824	306
Business & financial operations occs.	5.00%	4.90%	4.10%	1.025	305
Librarian, curator, archivist, & ed.	1.30%	1.00%	0.90%	1.247	301
Total (mean prose score 277-293)	35.60%	38.30%	37.10%	0.929	
Art. Design, entertainers, performers	1.20%	1.00%	0.90%	1.284	293
Protective service occupations	3.20%	1.40%	1.70%	2.302	291
Entertainment attendants & related	0.20%	0.10%	0.10%	2.726	288
Office & administrative support	15.80%	15.70%	15.40%	1.007	287
Sales & related occupations	8.10%	12.90%	10.90%	0.628	280
Installation, maintenance, & repair	2.50%	3.40%	3.60%	0.746	279
Healthcare tech & support	4.70%	4.10%	4.50%	1.162	277
Total (mean prose score 267 or lower)	25.60%	26.40%	31.60%	0.969	
Personal care & service occupations	3.20%	2.60%	2.60%	1.223	267
Food preparation & serving related	4.10%	5.60%	5.50%	0.728	263
<b>Philadelphia 2005 Simulated Literacy Scores</b>					
Production occupations	4.60%	5.70%	7.20%	0.811	256
Construction & extraction	4.50%	4.60%	5.40%	0.973	255
Transportation & material moving	4.90%	4.30%	6.70%	1.127	252
Food processing workers	0.40%	0.30%	0.40%	1.218	246
Building/grounds cleaning & maintenance	3.70%	3.00%	3.20%	1.248	230

*Sources: (i) U.S. Bureau of the Census, (ii) U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (iii) tabulations by authors.*

The top two growth occupations in Philadelphia, registered nurses and postsecondary teachers will employ an additional 7,000 workers in the next ten years. Both these occupations require intermediate to advanced literacy skills.

***How do literacy levels in Philadelphia fall across the industries located in the city?***

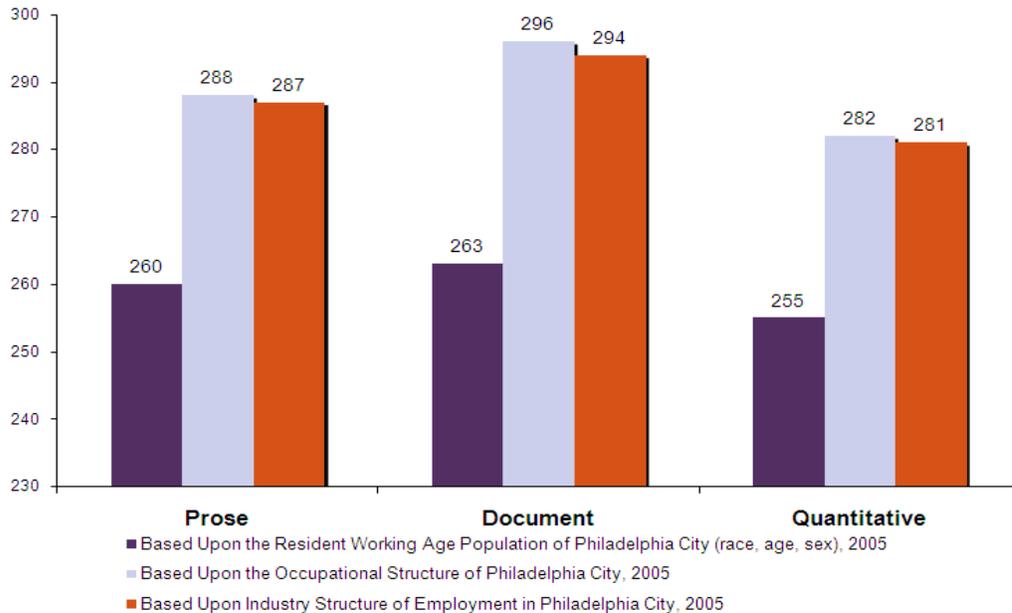
Philadelphia has a high concentration of industries that employ large numbers of college graduates such as the professional, technical, and managerial services industry group and healthcare industries. When industries are ranked by the national mean literacy scores, the top seven ranked industries employ 41% of all workers who work in Philadelphia. This is a larger share of these industries than located in the surrounding Pennsylvania suburbs or the in the state. Only 1 in 20 jobs located in Philadelphia are found in the seven industries with the lowest ranked mean literacy scores.

*Philadelphia’s industry mix requires higher levels of literacy skills than the industry mix in the surrounding suburbs or the state.*

The following chart (Chart 4) illustrates the gap between the literacy skills of Philadelphia residents and those required by the industry mix and occupations found in businesses located in the city. The first bar represents the mean literacy scores of Philadelphia residents and the second and third bar represent the mean scores found in the occupations and industry mix of businesses located in the city.

**CHART 4**

*Simulated Prose, Document, and Quantitative Literacy Scores of Based Upon Age-Gender-Race Characteristics of Working Age Residents of Philadelphia City and the Industry and Occupational Composition of Jobs Located in Philadelphia City, 2005*



*Sources: (i) U.S. Bureau of the Census, 2005 American Community Survey, Public Use Microdata Samples (PUMS) data file, tabulations by authors; (ii) U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy, Public Use Data Files, tabulations by the Center for Labor Market Studies.*

**What does this gap mean for Philadelphia?** Philadelphia businesses rely on suburban workers to fill the occupational gaps. Of those employed in Philadelphia, 27% live outside the city. Yet 40% of all workers in occupations that require the highest levels of literacy proficiencies live outside the city. One half of all scientists and those in legal occupations are commuters into the city for work. Those occupations requiring higher literacy skills make up 39% of the employment attached to businesses located in the city. Businesses located in Philadelphia rely on commuters to fill the literacy gap. As the city grows, occupations that require higher literacy must either find increasing numbers of workers meeting their needs from the surrounding suburbs or a large scale intervention to improve the literacy of Philadelphia residents is required. Developing the economic base of the city depends on city residents to create a vital supply of workers. Strengthening the city economy increases the vitality of the entire metropolitan region. The danger in relying on increasing numbers of suburban workers is that businesses may experience a loss of some of the benefits to locating inside the city limits and seek to relocate in a different metropolitan region. More highly skilled workers may choose to locate where commutes to work are shorter and leave the region.

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## Key Findings of the Center for Labor Market Research

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- **Employment attached to businesses located in Philadelphia is concentrated more towards occupations that require intermediate to advanced levels of literacy proficiencies – 39% of employment as compared to 35% in the Pennsylvania suburban counties and 31% in the state.**
- **The top seven ranked industries by national literacy scores employ 41% of workers working in Philadelphia, but 30% of these workers commute into the city.**
- **The literacy proficiencies of residents in the city of Philadelphia are considerably lower than the average level of literacy proficiencies required to work in the jobs located within the city's boundaries.**

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## What we know from Employers about Literacy Levels

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In the fall of 2007, the Philadelphia Workforce Investment Board completed a qualitative survey about literacy levels needed for entry level positions that require a high school diploma or less education. Twenty employers participated in over 10 different industries. Only one small employer had a totally open application process. All other employers screened applicants during the application process in one or more of the following ways:

- **The application had to be completed on-site**
- **The application had to be completed on-line**
- **There was a test of skills as part of the application process**
- **There was an interview that required reading for preparation**
- **There was an interview requiring details about past working experience**
- **There was a requirement for a high school diploma or GED – although the job might not require this credential**

On-line applications are the most common method of screening applicants. This is especially true for multi-stage applications. One of the human resource directors we interviewed articulated the difficulties presented by on-line applications. “If a person is not computer savvy... it’s not a real sophisticated system, compared to an Aramark where it’s more integrated. You can do our employment application and get out and come back and do the survey. I think some of the people, sometimes click on the wrong button and are out and can’t (figure out how to get) back in.”

This particular employer made the effort to contact qualified applicants with complete applications for an interview even if they were unable to understand how to complete the second part of the process: the survey. One of the most common complaints was that applicants often failed to complete applications, especially the requests for past experience. Applicants often call back and offer references from employers when no previous employment history has been included on the application. Employers found work experience combined with a reference from a past employer who would consider rehiring the worker again to be the best predictor of a “good” hire.

Our partners in the PA CareerLink Centers have large numbers of visitors who need help completing on-line applications. Many of those seeking jobs are unfamiliar with computers and how to negotiate from one part of an on-line application to the next. Computer literacy also becomes part of the entry-strategy for lesser educated workers.

Many employers make their application process explicit when job seekers make their first contact. For employers that use testing as part of their screening process, this eliminated applicants nervous about performing successfully. Employers also rely on word-of-mouth to discourage applicants that don’t have the literacy skills required for their entry-level positions. Some employers were well aware that their application process screened out workers with the lowest literacy skills while others had not explicitly thought about how their process might create a barrier for some qualified applicants. Employers felt strongly that their application processes were fair. One Staffing Director noted, “And some would say, well doesn’t the need to apply on-line screen out people? It probably does, but

those are people we wouldn't be able to hire anyway. If they are not computer savvy or can't read at a 3rd grade level, could we truly engage [these] people in employment?"

Job applicants are required to know English and to have basic prose and document literacy. Even unskilled entry-level occupations such as dishwashers in restaurants needed to read safety information and read labels to place stores in the appropriate places on the shelves. Safety came up repeatedly as an issue with applicants with below basic literacy. While soft skills such as a pleasant personality and good oral communication were often cited as more important in face-to-face interviews, some applicants never progress through the application process to show-off these skills.

Some employers provide training through orientations, shadowing, or formal curriculum attached to positions. A secondary role of these is to identify new hires with lower literacy levels that would make their new position challenging. Employers then have an opportunity to address the deficient early.

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## Where does this Leave Philadelphia?

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Employers who are unable to find skilled workers in the city are less likely to locate their business in the city. The metropolitan region losses employers if skilled workers or workers who can quickly learn a new skill are not available. The analysis by the Center for Labor Market Studies reveals a wide gap between the literacy proficiencies of residents and those required to capture jobs in the labor market created by businesses located in the city. Residents with poor literacy skills face challenges getting past the application process and struggle to find a way to become successful in the workforce.

Literacy education combined with work skills has proven successful in creating opportunities for residents without sufficient literacy levels to find stable work. Philadelphia's adult education providers have already developed a range of programs and models that are successfully improving the foundational skills of adults in our city. A multitude of successful programs exist, and everyday adult education providers are enhancing workers' employability and productivity by strengthening their workplace literacy, reading, writing, communication, quantitative reasoning, critical thinking, and other skills needed on the job. These critical organizations are located throughout the city and structure programs in a flexible manner (offering 1 on 1 tutoring, classroom instruction, and distance learning in the morning, afternoon, evening, or on weekends). There are classes that focus on teaching English as a Second Language skills, those that emphasize technical literacy, and others that

prepare students to obtain their GED or enroll in postsecondary education. More recently, in response to new research documenting the extent of the adult literacy challenges in the city and highlighting the insufficient resources to address these challenges, the adult literacy community responded by forming the Workforce Solutions Collaborative. This group, which represents more than 100 years of workforce literacy experience aims to 1) support incumbent and prospective employees in developing the workplace skills necessary to earn family sustaining wages, 2) promote economic development by addressing business and industries needs for a skilled workforce, and 3) support workforce and workplace literacy providers in a way that will enable them to build capacity, enhance programming, and share best practices. However, despite our city's many assets, there are clearly still a number of gaps in creating a full scale effort to improve the literacy proficiencies and, therefore, the workforce outcomes of the city's residents. The ability to grow the city, create stronger neighborhoods, and build the regional economy hangs in the balance.

*The gap between the literacy skills of Philadelphia residents and the literacy skills needed to work in Philadelphia reduces opportunities for Philadelphians to fully participate in the local economy and gain the advantages of the jobs offered by businesses located in the city. Likewise, the city loses. The flow of income to outlying communities reduces the benefits reaped by the local economy through taxes and the growth of service-based businesses when income increases and may stall the city's economy. In addition, the city will pay other social costs associated with residents unable to find work and with neighborhoods where residents are unable to maintain housing and support local shops.*

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## References

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