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The INSTITUTE for Public Policy & Economic Development

A partnership among Keystone College, King's College, Luzerne County Community College, Marywood University, Misericordia University, Penn State Wilkes-Barre, The Commonwealth Medical College, University of Scranton, & Wilkes University

JOBS –SKILLS MISMATCH?

Northeastern Pennsylvania suffers from higher than average unemployment – since the 1980s. Is the root cause structural, cyclical or both?

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Executive Summary

The purpose of this white paper is to inform stakeholders about unemployment challenges in the Scranton/Wilkes-Barre area in order to better understand the root causes, as well as solutions. For this to occur, we must understand the region's business and workforce needs.

The paper discusses two types of unemployment – cyclical and structural. Cyclical unemployment is a function of the economy and can be addressed through monetary policy. The recession caused job loss and stagnation that extended beyond the recession's technical end (June 2009). Structural unemployment defines a situation where there are significant job vacancies that cannot be filled, coupled with a high number of unemployed and maybe addressed through fiscal policy.

The Brookings Institution completed a study evaluating job vacancies and unemployment in the Scranton/Wilkes-Barre Metropolitan Statistical Area (MSA). The study pointed to a mismatch of skills. In particular, health and medical occupations offered more job openings, yet unemployment in that field was higher than average. Therefore, the MSA was identified as having a jobs-skills mismatch.

The Chicago Federal Reserve Board conducted research across occupations and various skill levels and unemployment on a national level. This study shows that, while there may have been a structural unemployment issue during the recession that is no longer the problem except in a few occupations.

Based on local data, the health care and social assistance, education and food services sectors provide for the region's greatest number of jobs. A number of occupations with varying skill levels within these sectors are presented in this paper. While we cannot ascertain the specific education attainment and skill level of locally unemployed residents, state research indicates that those with higher education levels comprise less of Pennsylvania's unemployed population. Yet job vacancies in the health and medical sector (those requiring moderate to high skill levels) are significant in the region. This indicates that this may be one field where there is a job-skills mismatch.

Regional job growth remains lower than average (even before the recession), which is indicative of a more cyclical issue — fewer companies expanding, starting up or relocating here than in other areas. Therefore, it may be inferred that the region has a combination of unemployment issues and should not be typified as having one particular unemployment issue.

Thus, solutions must address both cyclical unemployment and structural unemployment (job-skills mismatch) issues. Both issues require collaborative efforts in order to overcome. To address cyclical unemployment, continued efforts in business attraction, retention, creation,

and expansion must occur in conjunction with efforts to maintain quality of life amenities, improve the ease and cost of doing business, and ensure a pipeline of qualified workers. There are a number of excellent economic development organizations implementing various strategies to attract new business to the region. Therefore, government, non-profits and business must ensure that quality of life amenities are maintained and enhanced and that the ease and cost of doing business are attractive. Additionally, more efforts on business creation and expansion should have equal emphasis as they types of business are typically greater job generators and being home grown, are most likely to remain and expand in this location. Utilizing "economic gardening" techniques that focus on small – mid-size local/regional businesses in conjunction with the Small Business Development Center network is a proven tool used in many areas around the country.

A different form of economic development attraction should also be utilized – talent attraction. Specifically, efforts to attract talent with the education and skill level needed to fill the vacant jobs. The most obvious and perhaps, easiest method is to reach out to graduating seniors from our institutions of higher education. In order to get the more experienced or perhaps those with advanced and professional degrees, our higher education infrastructure can play a more vital role in working to attract alumni back to the region. Much informal data demonstrates that professionals raised in the region have a tendency or desire to return here in their mid-late 30s and 40s to raise families. The concept of talent attraction is a short term solution to much of the region's structural employment issues. For the long term, this coupled with a workforce preparedness initiative beginning in middle school is integral to the region's economic development future.

A coalition of Pre-K-20 education, business and industry and workforce providers must collaborate in the development of a qualified pipeline of workers to fill jobs in the region's expanding industries across all occupations. Business and industry can identify growing occupations and skill requirements. Education and workforce can work together to ensure that education and training are available. School districts can ensure that their teachers are aware of the regions strongest occupations and skills needed, so they can begin career awareness as early as elementary school. These types of collaborations leverage regional assets, while mitigating regional challenges.

The problem is further exacerbated by wage data. Wage data demonstrates that the region pays less than the state and national averages for the same occupations. This is further demonstrated by reviewing US Census data on per capita and household median income. Upward pressure on wages will also increase the region's success in filling vacant occupations caused by the structural unemployment.

Unemployment Studies – Structural v. Cyclical Unemployment

The Brookings Institution completed a study using education attainment, occupations, and job openings over a six year period (2006 – 2012) to evaluate whether unemployment in the nation's 100 largest MSAs could be considered cyclical or structural. Cyclical unemployment is a lack of jobs and job growth usually counteracted by changes in economic policy, while structural unemployment points to a mismatch between available jobs and education/skill requirements. The study identified five key findings, several of which could be ascribed to the region, including:

- *Advertised job opening require more education than all existing jobs and more education than the average adult has attained;*
- *Metro areas vary considerably in the level of education required by job openings posted online;*
- *Unemployment rates are 2% higher in large metro areas with a shortage of educated workers relative to demand and have been consistently higher since before the recession;*
- *Declines in industry demand and housing prices explain most of the recent cyclical increases in unemployment rates, but education gaps explain most of the structural level of unemployment over the past few years; and*
- *Metro areas with higher education gaps have experienced lower rates of job creation and job openings over the past few years.*

The Brookings report indicates that the Scranton/Wilkes-Barre MSA does not have enough skilled workers for the available job opportunities. Hence, the greatest reason for high unemployment in the MSA is "structural," as opposed to cyclical (lack of jobs and job growth). This means that those who are unemployed are generally not well suited for current job openings because there is a mismatch between their education and skills and the job requirements.[i]

The U.S. Bureau of Statistics shows that the unemployment rate in northeastern Pennsylvania declined from 9.8 % in July of 2012 to 8.6 % (25,142 people)[ii] in November 2012, but compared to Pennsylvania as a whole (7.3 %)[iii] and the United States (8.5 %)[iv], it still remains high. The region, however, has always been plagued by higher than average unemployment and slower than average job growth. Historically, the region has better supported a blue collar economy.

The Brookings study also reports that 52% of those unemployed hold high school diplomas, while just 32% of available jobs require a high school diploma.[v] This workforce segment has limited career opportunities and is more prone to unemployment.

Further, 34% of region's available jobs require an Associate's degree. However, according to the Brookings report, 32% of the unemployed hold an Associate's degree. The Brookings report asserts that adults with an Associate's degree may have the level of education required by the position, but not the right type of degree required.

Furthermore, the report indicates that 33% of all available jobs require a Bachelor's degree, and 16% of the unemployed have Bachelor's degrees.[vi] Adding to the dilemma is that only 22% of the working population has a Bachelor's degree.[vii] There are more opportunities for those holding Bachelor's degrees to meet the region's employment requirements. Despite the education level being met, it appears that the type of degrees may not match the employment requirements. Hence, it appears that there is a job-skills mismatch in the region.[viii]

On the other hand, the Chicago Federal Reserve Bank (FRB) reported that only a small segment of elevated unemployment rate is attributable to job-skills mismatch. Its study evaluates employment data by skill level and found little support for a jobs-skills mismatch. It also evaluated employment data by sector and found limited evidence of a job-skills mismatch. The Chicago report concludes that there are some pockets in the labor market where supply may be the issue, specifically in occupations that require moderate skill levels.[ix]

Labor search theory is the framework used to study the job-skills mismatch. The standard model asserts, "Mismatch is the outcome of a decline in matching efficiency. Hiring is the outcome of matching vacant jobs and unemployed workers. Therefore, greater matching efficiency implies a smooth process. A lower efficiency implies that it is relatively more difficult to generate additional hiring for a given amount of vacant jobs and unemployed workers."[x]

As a whole, the U.S. has been concerned about job-skills mismatches for the initial years of the economic recovery (June 2009 – present), as the job vacancy rate rose, while the unemployment rate barely moved; this is called the Beveridge Curve. Economists noted that there has been some recent change (2012) in this curve that is consistent with cyclical changes as opposed to a job-skills mismatch.

The Chicago study cited a study by Aysegul Sahin, Joseph Song, Giorgio Topa and Gianluca Violante, which evaluated industry unemployment and job vacancies. The study showed a job-skills mismatch during the recession, which has since subsided.

The Chicago study also focused on worker supply and demand across occupations and skill levels. The report found that employment levels among many occupations were lower in 2011,

compared with 2007, which reveals that a job-skills mismatch is not an issue. The study did find a few occupations where employment levels were higher, meaning that there could be a shortage. The study also measured trends in demand for labor across all skill levels and found that, for a small group of mid-level occupations, demand for jobs remains lower. For those mid-level occupations, there is a greater number of job vacancies.

Regional Industries

To glean a better understanding of the problem, we must look at the area's population, industries, job openings, education requirements and academic institutions. From a December 2012 estimate, the Scranton/Wilkes-Barre MSA has a combined labor force population of about 291,871.[xi]

Presently, the industries with the highest employment levels are:

Industry	Employment
Healthcare and Social Assistance	47,288
Education and Training	11,462
Food Services	19,365
Sales/Retail Services	27,780
Office and Administrative Support	13,240
Manufacturing	28,222
Transportation and Warehousing	10,926

Source: US Census

The greatest number of employment opportunities in the healthcare industry is for Registered Nurses (RNs) (5,860), Certified Nursing Aides (3,460), and Licensed Practical Nurses (2,220).[xii] Further, the greatest number of employment opportunities in Education and Training are for elementary school teachers (2,220), secondary school teachers (2,250) – excluding special education teachers, and teacher assistants (2,090).[xiii]

The region's next largest industry is food services, with the vast majority of employment opportunities in preparation and serving (6,690), cooks (1,230) and waiters and waitresses (3,390).[xiv]

The majority of employment opportunities in the sales/related industry are for cashiers (7,920), retail salespersons (9,260), and sales representatives (3,330).[xv]

Prevalent employment opportunities in the offices and administrative support sector are for customer service representatives (5,700), secretaries and administrative assistants (4,280), bookkeeping, accounting, and auditing clerks (3,090), and office clerks (6,780).[xvi]

In the manufacturing/production sector, the primary employment opportunities are for team assemblers (4,080), and packing and filling machine operators and tenders (1,750).[xvii]

Lastly, the major employment opportunities in the transportation sector are heavy and tractor trailer truck drivers (4,020), and laborer and freight, stock, and material movers, hand (7,040).[xviii]

Education and Training

To better understand the job-skills gap based on educational attainment, there are three education types to consider, including: 1) professional level – representing experts specialized in a specific field, such as nurses, engineers, lawyers, doctors, educators and scientists; 2) technical - which usually include those with certifications or trade education; and 3) high school diploma/GED training. Detailed information on the education and skill level required for primary occupations in the seven top industries is located in the appendix.

Pennsylvania's Unemployed

Following is a portion of the executive summary from a 2010 report by the Center for Workforce and Information Analysis at the Pennsylvania Department of Labor:

> *The demographic characteristics of Pennsylvania's unemployed people reflect both the demographics of the state population and the fact that minority groups have higher rates of unemployment. Three-quarters of Pennsylvania's unemployed people are white compared to a white population share of 83 %. African-Americans account for 13 % of unemployed people and 9 % of the population; Hispanics account for 9 % of unemployed people and 4 % of the population.*[xix]
>
> *The geographic distribution of unemployed people similarly reflects the population distribution of the state, while rural areas and central cities have higher rates of joblessness than most suburban areas. The 22 Pennsylvania counties with unemployment above 10 % in June 2010 included 20 rural counties and the city of Philadelphia. Most people who are unemployed in Pennsylvania have an extensive work history. Of Pennsylvanians unemployed in 2009, roughly half had no previous unemployment claims from 2001 to 2007. Over this same period, 80 % worked at least five of seven years*[xx]*.*

Many of Pennsylvania's unemployed have significant education. Four out of every 10 unemployed Pennsylvanians – some 233,000 people in the first half of 2010 – have more than a high school education. Eight out of 10 of Pennsylvania's unemployed people – over half a million unemployed people in the first half of 2010 – have at least a high school diploma. Occupational data also drive home the significant skills of currently unemployed Pennsylvanians. For example, nearly 39,000 managers and supervisors, roughly 22,000 educators, more than 15,000 engineers, scientists and computer professionals, and 9,500 writers, reporters, actors and related occupations are unemployed.[xxi]

Regional Job Availability and Educational Requirements

The Brookings report indicated that the occupations with the most current job opportunities (January-February 2012) include:

Available Job Openings by Industry	**# of Job Openings**
Health Diagnosing and Treating Practitioners	1,615
Motor Vehicle Operators	1,041
Computer Occupations	590
Information and Record Clerks	482
Retail Sales Workers	422
Supervisors of Sales Workers	402
Other Management Occupations	383
Health Technologists and Technicians	352
Sales Representatives/Services	322
Sales Representatives/Wholesale and Manufacturing	290

Source: Brookings Institution

Health diagnosing and treating practitioners occupations include numerous health care specialists, including audiologists, chiropractors, dieticians, occupational and physical therapists, physician assistants, respiratory therapists, and speech-language therapists — all of which are professional occupations. Although they are different specialties, all require at least a four-year degree in a medical diagnostics area that correlates with the specialty. Most specialties require post-graduate training and passing a test for licensure.[xxii]

Motor vehicle operators usually only require a high school diploma plus a CDL license. However, truck drivers transporting hazardous materials (HAZMAT) must have a hazardous materials endorsement (H). Obtaining this endorsement requires an additional knowledge test and a background check.[xxiii]

Most computer occupations require a Bachelor's degree, since they must study and solve complex technology problems.

Furthermore, most information clerks are trained on the job in the policies and procedures of the business or government agency that employs them. Some types of information clerks, such as those who work for government agencies, may have to go through longer periods of training. The minimum education requirement is a high school diploma or equivalent,[xxiv]

Similarly, most retail sales workers receive on-the-job training, which usually lasts a few days to a few months. In small stores, newly hired workers often are trained by an experienced employee. In large stores, training programs are more formal and are generally conducted over several days. Depending on the type of products they are selling, retail sales workers usually need a high school diploma and may be given additional specialized training. Like sales workers, supervisors of sales workers usually require a high school diploma or equivalent. Yet, most jobs require them to have a few years of field experience.[xxv]

Depending on the exact management occupation, most positions in this industry require a Bachelor's degree, and often require a specialty or professional degree. Many also gain business management skills by completing a Master's degree in Engineering Management (MEM) or Technology Management (MSTM), or a Master's in Business Administration (MBA). Lastly, a Bachelor's degree in finance, accounting, economics, or business administration is often the minimum education needed for financial managers. Many employers now seek out candidates with a Master's degree, preferably in business administration, finance, or economics.[xxvi]

Occupational health and safety technicians may receive on the job training. Many attend community college or vocational school and earn an Associate's degree or certificate before entering such position. These programs typically include courses in respiratory protection, hazard communication, and material handling and storage procedures. Some or all courses may be taken online, depending on the program. Although technicians with formal education learn standard laws and procedures while in school, a moderate amount of on-the-job training is required for specific work environments.[xxvii]

Health technologists require an Associate's degree plus additional on-the-job training. Some entry level positions only require a high school diploma. However, many positions now require certification, an Associate's degree or Bachelor's degree. Most healthcare workers need some type of licensure or certification related to their specialty. In specializations that do not require certifications, employers typically prefer certified health technicians. Health technologists employed in medical labs typically must complete an appropriate two-year program. Both technologists and technicians are technical employment positions.[xxviii]

Lastly, many companies have formal training programs that last up to a year for new wholesale and manufacturing sales representatives; a high school diploma is sufficient for many positions. In some programs, trainees rotate among jobs in plants and offices to learn all phases of producing, installing, and distributing the product; these are technical occupations as well. Many in these types of occupation have either the Certified Professional Manufacturers' Representative (CPMR) certification or the Certified Sales Professional (CSP) certification, both of which are offered by the Manufacturers' Representatives Education Research Foundation. Certification typically involves completing formal technical training and passing an exam.[xxix]

More and more the demand for more highly skilled workers is a result of the ongoing, competitive changes in modern society. Unfortunately, because only a total about 22% of the Scranton/Wilkes-Barre metropolitan population has attained a Bachelor's degree[xxx], many workers are immediately at a disadvantage in this competitive environment. However, based on the largest industries and the current job openings, it seems like some people do have the educational requirements necessary, but do not have the particular degree or certification for regional jobs.

Average Wages

An important factor that helps determine the composition of the available workforce is wages. The following data show the wage difference in the region compared with national averages, among the region's largest industries:

Industry	Wilkes-Barre/Scranton Mean Hourly wage	National Mean Hourly Wage	Percent Difference
Health Care Practitioners and Technicians	$29.32	$34.97	-16%
Office and Administrative	$14.79	$16.40	-10%
Transportation and Material Moving	$15.11	$15.96	-5%
Food and Preparation	$9.78	$10.30	-5%
Production and Manufacturing	$15.84	$16.45	-4%
Sales Related Field	$15.32	$18.04	-15%
Education/Training	$24.74	$24.46	1%

Source: Bureau of Labor Statistics

As demonstrated above, with the exception of the education/training sector, the positions that require more education and experience are those with the greatest wage differentials, meaning that people are likely to earn more elsewhere in the same position. This finding is validated by a reviewing income data completed by the U.S. Census Bureau. The region's per capita and household income has been less than state and national averages for a number of years.

Post-Secondary Education

Lackawanna and Luzerne Counties have an incredible higher education infrastructure. There are a number of colleges and universities (public and private), community colleges, technical and trade schools. Offerings include a variety of degrees, including graduate and professional, certifications, and continuing education.

Strategies

The State of Minnesota has implemented a sixteen-week program called *Right Skills Now* (developed by the Washington D.C. Manufacturing Institute), which has been successful as a result of a collaboration between business, education and government. The program creates career opportunities in the manufacturing sector by giving students the opportunity to earn college credits toward a degree and, upon completion, placing them in an eight-week internship at a company to allow them to apply and enhance their new skills.[xxxi]

Magnet schools are another strategy to combat a job-skills mismatch. There, school curriculums are tailored to a region's business composition. New York City has P-Tech - a partnership between New York City public schools, City University of New York and IBM. P-Tech offers mentoring and a technically-focused education (computers and engineering), with a six-year program that culminates in an Associate's degree. This model requires no academic entrance requirement and is tuition-free; it is being imitated at five other Chicago and New York schools.[xxxii]

The State of Oklahoma offers an energy curriculum every level of K-12. Likewise, the State of Texas has an oil and gas high school to educate students in all energy occupations (riggers to engineers). Finally, a Career and Technology Center in Ohio is focusing on training high school students in entry level natural gas drilling rig jobs.

A strategy for the existing workforce is on-the-job-learning and continuing education. In a recent survey conducted by the Society for Human Resources Management (SHRM) and Achieve, over the past ten years, employers have increased technical and educational requirements in many industries and job categories. Additionally there are more STEM related jobs, as well as more positions that require specific technical requirements.

Summary and Conclusion

National studies have shown that 86% of the people between ages 25 and 64 with a Bachelor's degree or higher participated in the workforce in 2009, compared with 76% of those with only a high school diploma. Also, unemployment rates are usually higher for those with lower

educational levels. In 2009, 15 % of the total unemployed population was comprised of adults (ages 25 to 64) who had dropped out of high school. Approximately 10% was comprised of adults with a high school diploma or equivalent, while just 5% represented those with a Bachelor's degree or higher.[xxxiii]

Another study completed during 2011 reported that the pattern of the distribution of unemployed in the U.S. by education attainment did not vary much from 2009. Then, approximately 26 % of the unemployed were adults with a high school diploma, 21% were people with some college, 11% were those who had a Bachelor's degree and 5% were people with an advanced degree.[xxxiv]

	2012	
Unemployment	**Education**	**Median Weekly Earnings**
2.5%	Doctoral	$1,624
2.1%	Professional	$1,735
3.5%	Master's	$1,300
4.5%	Bachelor's	$1,066
6.2%	Associate's	$785
7.7%	Some College, No Degree	$727
8.3%	High School Diploma	$652
12.4%	High School Drop Out	$471

Source: Bureau of Labor Statistics

By comparison, job growth in northeastern Pennsylvania has been slow and even retracted during the past several years. It is most likely that the region's unemployment is tied to a combination of structural and cyclical causes.

An improving economy and creating an environment that is conducive to entrepreneurial activity and business growth and retention will help to combat sluggish job growth. Additionally, more efforts on business creation and expansion should have equal emphasis as they types of business are typically greater job generators and being home grown, are most likely to remain and expand in this location.

Attention to quality of life amenities (housing, crime, aesthetics, and recreation to name a few) coupled with an educated and trained workforce is key to reducing cyclical unemployment. Quality of life amenities from affordable housing to parks and green space to solid public education and modern infrastructure and arts and culture, recreation and venue coupled with diversity are magnets for a vibrant and innovative region. These attributes need to be on the priority list in order to encourage positive economic development. Too often, they are low on the priority list.

A different form of economic development attraction should also be utilized – talent attraction. Specifically, efforts to attract talent with the education and skill level needed to fill the vacant jobs. The most obvious and perhaps, easiest method is to reach out to graduating seniors from our institutions of higher education. In order to get the more experienced or perhaps those with advanced and professional degrees, our higher education infrastructure can play a more vital role in working to attract alumni back to the region. Much informal data demonstrates that professionals raised in the region have a tendency or desire to return here in their mid-late 30s and 40s to raise families. The concept of talent attraction is a short term solution to much of the region's structural employment issues. For the long term, this coupled with a workforce preparedness initiative beginning in middle school is integral to the region's economic development future.

Structural unemployment can be addressed through a coalition of workforce, education (representing K-20+), business, and government to use data on the region's business composition, employment needs and future prospects to begin fostering education and career opportunities in elementary school. A skilled and educated pipeline of worker's is one of the strongest economic development tools a region can possess. The word region should be emphasized here, as Lackawanna and Luzerne County not only house a greater number of large, regional employers, but they also have a regional economy - whereby residents and the workforce cross municipal boundaries on a daily basis. Workforce is evaluated at the regional level by corporate real estate executives and site selectors. Additionally, education should not only be described in terms of four-year degrees, addressing structural unemployment means ensuring a skilled and educated workforce, therefore education can and should be any formal post-secondary education. This recognizes that there are employment opportunities in many different job categories.

Appendix

As previously mentioned, Registered Nursing represents the largest occupation in the health care sector; RNs require a Bachelor's degree in nursing. To become licensed in Pennsylvania, RN applicants must have completed a nursing program approved by the State Board of Nursing and must also have passed the National Council Licensure Examination for Registered Nurses. RNs with an active and current license in another U.S. state may also apply for licensure by endorsement in Pennsylvania. RNs in Pennsylvania must renew their license every two years, during which time they must complete 30 hours of continuing education (CE) offered by a provider approved by the State Board of Nursing.[xxxv]

The second largest occupation is in the sector is Certified Nurses Aid (CNA), which requires a high school diploma plus training. Training requirements vary from job to job, but it usually

follows the same structure in programs offered in high schools, vocational-technical schools, nursing homes, hospitals and community colleges. To become a CAN, an individual must earn a postsecondary certificate or award, indicating that they have learned the basic principles of nursing and completed supervised clinical work. Nursing homes that offer CNA training classes require individual work at their facilities for a certain period of time in exchange for the training. Formal training in schools consists of a mix of classroom setting and hands-on practice sessions. When they finish their state-required education, CNAs and attendants take a competency exam. In Pennsylvania, candidates are required to complete a minimum of 75 hours of CNA course work and 100 hours of clinical rotation before taking the state licensing exam. Nurse aide classes typically range from two to six months; individual schools often have special requirements to begin their training program. [xxxvi]

Finally, Licensed Practical Nurses (LPN) are technical positions that require an Associate's degree in nursing plus completing a Pennsylvania LPN training program. The training usually takes about a year to finish, but some schools may offer accelerated LPN programs that can shorten education time. Typically, LPN certificate courses are offered by community colleges or vocational schools, which must be approved by the Pennsylvania Nursing Board. Candidates receive training to provide them with the necessary knowledge of the fundamentals of nursing, nutrition, poison control, biochemistry, and skills on basic nursing procedures. They also must complete an internship at an accredited medical facility to channel learned skills and knowledge to actual practice. Upon course completion, the student is eligible to take the LPN licensing exam.[xxxvii]

The greatest number of occupations in the education and training sector are elementary and secondary school teachers, both of which are professional positions, while teacher assistants are technical positions. The requirements to become a teacher include obtaining a Bachelor's degree, completing an approved program of study leading to certification in the area in which the certificate is requested, maintaining a 3.0 grade point average, and successfully completing Pennsylvania's required tests.[xxxviii] Teacher assistants must hold a high school diploma as a minimum requirement; some districts require at least two years of college or an Associate's degree. Although there are no national qualifications to work as a teacher assistant, there are four grades of teacher assistants[xxxix], including:

Teacher Assistant Grade	Typical Requirements
TA1	Entry Level-some experience may required
TA2	National Vocational Qualification (NVQ) Level 2
TA3	National Vocational Qualification (NVQ) Level 3
HLTA	Experience, NVQ level 3, plus a literacy and numeracy qualification at level at 2

Employment qualifications for teacher assistants fall into two categories, including work-based and work-related. Work-based qualifications usually require the teacher assistant to be employed in a school, and the teacher is assessed based on their performance at work. However, some training providers may arrange work placements to enable them to complete a level National Vocational Qualifications 2 (NVQ2). Work-related qualifications through certificates, diplomas or foundation degrees do not require teacher assistants to be in a job and are usually offered by a training provider, such as a college or university. Entry requirements for these courses vary by provider.[xl]

In the food services sector, most job opportunities require basic training. Depending on the type of cook, the position may need more school/training, which makes it a technical job. Training occurs in a culinary institute, community college or on the job, and consists of cooking skills, portion control, and compliance to regulations of food storage and preparation. Some employers, particularly those in fast-food restaurants, teach new workers using self-study programs, online programs, audiovisual presentations, or instructional booklets that explain food preparation and service skills. But most food and beverage serving and related workers pick up their skills by watching and working with more experienced workers. Some full-service restaurants also provide new dining room employees with classroom training that alternates with periods of on-the-job work experience. These training programs communicate the operating philosophy of the restaurant, help new employees establish a personal rapport with other staff, teach formal serving techniques, and promote teamwork.[xli]

The most predominant occupations in the sales/related industry are non-technical, as the vast majority requires basic training. Cashiers and retail salespersons are usually required to at least have a high school diploma or equivalent, primarily for selling non-technical or non-scientific products. However, those selling scientific and technical products must have a Bachelor's degree. While many workers in the sales industry have only the training provided by their employer to become proficient in the product or service, others may be required to have business administration or marketing Bachelor’s or Associate’s degrees.[xlii]

The greatest number of occupations in the office and administrative support sector are technical positions, since they require an Associate’s degree. Although administration courses are offered at community colleges, other educational courses are available through a variety of venues. Computer skills, organization skills and people skills are some types of training or coursework needed. For example, most customer service representatives typically have at least a high school diploma. However, some workers may need some college education or an Associate’s or Bachelor’s degree, as employers increasingly demand a more skilled workforce. Customer service representatives who serve as technical support specialists typically answer questions about insurance or financial services and often require a state license, as well as a

four-year degree. Licensure requirements vary, but usually include passing a written exam. Some employers may provide training for such exams.[xliii]

To work as a secretary or as a general office clerk, most positions require a high school diploma and some kind of additional education to acquire basic office, computer, and English grammar skills.[xliv] Workers often learn their skills on the job; however, courses in office practices, word processing, and other computer applications are particularly helpful. [xlv]

Most bookkeeping, accounting, and auditing clerks require a high school diploma, as well. Nonetheless, some employers prefer candidates who have some postsecondary education, particularly coursework in accounting. In 2009, 25% of these workers held Associate's degrees or higher.[xlvi]

Additionally, most manufacturing/production sector occupations require workers to have a high school diploma plus on-the-job training for safety and health purposes required by Occupational Safety and Health Agency (OSHA). OSHA also offers training and educational materials that help businesses educate their workers and comply with the Occupational Safety and Health Act.[xlvii] Job training may include use of basic computers and specialized equipment for entry level associate jobs. Those at the supervisory or management level may hold degrees in logistics or production.[xlviii]

Lastly, the transportation Industry usually requires drivers to hold a commercial driver's license (CDL). Obtaining a CDL requires passing written, skills and vision tests. Training is usually required, but most of positions require less than a month of on-the-job training. Some workers need only a few days of training. Certain hand freight, stock, and material movers and refuse and recyclable material collectors incur up to three months of training.[xlix]

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