Where are the jobs in our region?

Why is there a skills gap in St. Louis?

What's the labor market value of degrees and certificates?

How do online degrees compare with traditional degrees?

Do employers prefer an experienced worker over a highly-skilled new graduate?

How will the Affordable Care Act affect employment levels?
FORWARD

St. Louis Community College is pleased to present to the region the fifth consecutive *State of the St. Louis Workforce Report*. We believe this annual research study provides timely and critical workforce and economic intelligence that helps our community and strategic partners respond to the most pressing talent development issues. Since the first report in 2009, it has guided St. Louis Community College in the development of new programs and services for our students and employer partners. Beginning with the development of 13 new accelerated training programs through the expansion of entrepreneurial services, the establishment of our WorkKeys® Solution Center and the securing of nearly $7.7 million in Department of Labor grants to innovate the way that we develop and deliver healthcare and manufacturing training programs, the State of the St. Louis Workforce Report has been a vital asset to our efforts. This years’ report will also help inform us about our next, new workforce initiative, “Career Coach.” Career Coach will not only bring students actionable intelligence about jobs in demand but also link them with high quality training programs to prepare them for those jobs.

Again for 2013 we telephone interviewed over 1,200 employers, surveyed over 180 students as well as conducted in depth interviews with smaller groups of both students and employers. We compiled public labor market information and to provide deeper insights, utilized new analytical tools such as the Burning Glass real time labor market analytics tool. The information we gathered was broad and deep. It told the story of an improving economy and an increase in employer optimism, but with a continued bias towards caution. It informed us that there is a very competitive labor market with a premium on knowledge workers. It revealed that soft skills were still the major shortcoming of job applicants and that a lack of qualified graduates in various disciplines was the most cited reason for skill shortages.

We learned much from asking our students about their experiences. They were very confident in their abilities and the opportunities they perceived. Although not all were prepared for training upon entry, by the time they completed they were confident in both their technical and soft skills abilities.
Over 95% applied the skills they learned in their programs to improve performance on the job. Finally, we were once again reminded that when students are engaged and supported they succeed.

We would like to thank and acknowledge our employers, students, research and media partners without whom we could not be able to bring this informative workforce report to the region. We hope you will reflect on the findings and perceptions contained in this report and put them to use for the benefit of our community.

Sincerely,

Myrtle E.B. Dorsey, Ph.D.
Chancellor

Roderick Nunn, D.M.
Vice Chancellor for Economic Development and Workforce Solutions
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EXECUTIVE SUMMARY

The St. Louis regional economy continues the gradual process of recovery from the recession of 2007-09. Our economy is a reasonable reflection of the diversity of the national economy and is buffeted by the same national and global trends, both positive and negative. With Europe in recession and growth slowing considerably in China, the U.S. economy is seen as a safe haven for investment despite its lackluster growth rate. Stock market gains have reflected those investments as well as being driven by U.S. monetary policy. Those gains have not translated into employment growth. Employers have learned to produce at higher levels with fewer employees. Uncertainty about government policies have also contributed to employers remaining cautious. Quarterly GDP growth rate has been less than 2% consistent with national employment growth of less than 200,000 new jobs monthly. The national unemployment rate as of July declined to 7.4% but this is due to continuing decline in the labor force participation rate as well as job growth. In short the economy has not reached the “escape velocity” necessary to bring down unemployment to historically normal levels. Nevertheless, job growth has been steady if not spectacular and the unemployment rate is on a downward track, if only gradually.

The St. Louis MSA seasonally adjusted unemployment rate as of May 2013 was 7.4%, slightly lower than the national rate of 7.6% in that same month. The MSA unemployment rate has dropped from 7.7% in May of 2012 but over 104,000 area residents remain unemployed. Unemployment is highest in the leisure and hospitality and construction sectors. Between 1996 and 2012 the fastest growing age cohort in the workforce was 55-64, raising issues of retirement and impact on the healthcare sector. Measures of educational attainment in the St. Louis workforce indicate that half of the region’s 25 and older population have a high school diploma but no post-secondary education. Those holding an associate degree, or higher, represent 39% of the workforce, while 10% have less than a high school degree.

The State of the St. Louis Workforce Report is divided into three sections. The St. Louis Economy compiles labor market information which is publically available as well as data which is gathered through proprietary analytical tools. The Employer Survey is based on a telephone survey of 1200 employers in the region and in depth interviews of selected employers. The Community College Completer Survey is a combination of an on-line survey and focus groups to gauge students’ perceptions of their training experience and job readiness.

The Employer Survey reveals that, as compared to 2012, more employers anticipating increasing employment levels while fewer anticipate decreasing levels. The majority of employers, 57% plan to
maintain current levels, reflecting continued caution. Economic conditions remains the most cited barrier to employment expansion, but is cited by significantly fewer employers than the previous report. A shortage of workers with knowledge and skills is now the second most frequently cited barrier. Once again employers report that soft skills represent a more critical shortcoming of job applicants than technical skills. Communications remains the most cited shortcoming. Customer service was cited most frequently by employers as a skill shortage in a functional area. When asked the reasons for skill shortages employers most often cited a lack of qualified new graduates in the discipline.

In order to address these skill shortages employers most often cited hiring less experienced workers and training them but this response was down from the previous year while more employers responded that they are hiring outside the region and hiring contractual employees.

Employers continue to increase education and experience requirements reflecting both the opportunity of a slack labor market but also the need to acquire knowledge workers who can function in a growing knowledge economy. When asked to place a labor market value on degrees and experience employers favored the experienced worker over a new graduate. They also favored a degree over an industry certificate at the bachelor’s degree level and higher but favored the certificate over an associate degree. The majority of employers valued an on line degree as favorably as a traditional degree for entry and mid-level positions but favored the traditional degree for advanced positions.

The Community College Completer Survey revealed that students were satisfied with their choice of training programs. Over eight in ten would choose the same program again. Most students, 85%, felt prepared to enter their training program but 42% had to take remedial or preparatory programs. By the end of their program students felt well prepared for the workforce. Over nine out of ten students felt they were somewhat or strongly prepared in the areas of technical skills and soft skills. When asked if they were able to apply their skills to improve performance on the job 95% responded “Yes.”

For the second year, personal connections with advisers, faculty and other students were the key to keeping students retained and engaged. Survey data and focus group information aligned with national studies of best practices of student engagement. Simply put, when students are engaged and supported they succeed.

Overall, the State of the St. Louis Workforce Report reflects optimism on the part of both employers and students. However, the results reflect the challenges of a recovering economy for employers, the hard facts of a competitive labor market for college graduates and the critical importance to educators of designing training programs that are both effective and engaging for students.
METHODOLOGY

The 2013 State of the St. Louis Workforce Report, the fifth in an annual series, provides insights into the range of economic conditions and workforce issues affecting the St. Louis regional labor market. In addition to analysis of available government data, the study includes a large employer survey covering a variety of hiring and workforce issues, a series of in-depth executive interviews with important local employers and a survey followed by facilitator-led focus groups of recent community college completers at St. Louis Community College.

**Employer Survey**

Conducted by telephone, this annual employer survey, gathers responses from over 1,200 local companies in the St. Louis metropolitan area. Firm size ranged from five employees to well over 10,000, with 62 percent of survey respondents having 5-24 employees. The survey included questions regarding past and future hiring trends, the value of experience over degrees, benefits offered and other workforce skill requirement issues.

**Employer Case Studies**

Case study interviews were conducted with six area employers. Employers included in this analysis covered a variety of industries. In addition, employers selected for these conversations covered a range of size, scope and culture. They included start-ups, entrepreneurial operations with flat streamlined cultures and well established companies with significant organizational hierarchal structures. The interviews were designed to have the employer describe their “Ideal Employee” and what, if any, role they expect colleges to play in developing such an employee.

**Community College Completer Survey and Focus Groups**

For the second year in a row as part of the research report, STLCC conducted a telephone survey of recent community college graduates. This year over 180 STLCC program completers responded to the survey. Focus groups of interested respondents were also held with student completers to provide the report with more color and context around the students’ experience and gauge their perceptions of their training experience and job readiness.
ST. LOUIS ECONOMY

The St. Louis Missouri-Illinois bi-state Metropolitan Statistical Area (MSA) consists of 16 counties that span the Mississippi River with an estimated population of nearly 2.8 million. According to the U.S. Bureau of Economic Analysis, the area had a Gross Domestic Product (GDP) of $132 billion in 2011. Private sector service providers accounted for 73 percent of the regions’ output, followed by goods-producers (17%), and government (10%).
**Employment**

A varied economy with a labor force of over 1.3 million that work in a broad array of industries frames the St. Louis MSA. One out of three job holders work in Healthcare, Education, or Professional and Business Services. From May 2012 to May 2013, the largest employment growth was in Retail Trade, Education and Health Services, and Financial Activities. Government, Manufacturing, and Information lost the most employment.

![St. Louis Industry Employment Chart](image)


St. Louis is home to several industry clusters with large employment concentrations in several sectors. Plant and medical science research and production represent key clusters with a range of companies and research institutions involved in these activities. Advanced manufacturing in transportation equipment, particularly aerospace and automotive, food and related products, and industrial machinery are also robust in St. Louis. Information technology and financial sectors are strong in the region as well.
Unemployment

In May of 2013, the St. Louis MSA seasonally adjusted unemployment rate was 7.4 percent, marginally lower than the national rate of 7.6 percent. Fortunately the unemployment rate has declined over the year, decreasing from the May 2012 rate of 7.7 percent. However there are still over 104,000 people estimated to be unemployed in the area.

The unemployment rate, nationally, and regionally, declined but entering the job market remains a challenge given the quantity of job openings available. Change in the job market over the past decade is reflected in the chart below. Job openings and unemployment rates provide a measure of labor demand based on the gap between the two measures. The gap is small in good times, (generally less than 2), but as the 2009 peak of 8.2 illustrates, during the recession the gap widens. The national gap is now closer to 4.9 but that level remains elevated and is declining at a slow rate.

Source: U.S. Bureau of Labor Statistics
Unemployment Demographics

An uneven effect on the labor force is still evident as a result of the recession and the prolonged recovery. As the chart shows, age and sex is one of the largest distinctions. In the St. Louis metro area during 2011, younger workers, particularly those under age 21, had unemployment rates at or above 15 percent. Showing the highest rate at 34 percent are males in the 16-19 age bracket. Young males between ages 20 and 24 had considerably higher rates than females. Men, in most age groups, had higher unemployment rates than females.

Unemployment rates for 2011 were the highest in the Leisure and Hospitality and Construction industries. At 16.1 percent, Leisure and Hospitality experienced the greatest unemployment rate. The recession, from an industry standpoint, struck the housing market exceptionally hard, and, as a consequence, many construction workers, one in ten, were out of work in 2011.

Source: 2011 American Community Survey, U.S. Census Bureau

Source: U.S. Department of Labor, Bureau of Labor Statistics
Geographic Profile of Employment and Unemployment 2011
As shown in the chart below, educational attainment also played a large role in the unemployment rate of individuals. In St. Louis the unemployment rate for workers with less than a high school diploma was 19.2 percent. As education levels increased, the rate of unemployed declined considerably reaching 3.5 percent for those with a Bachelor’s degree or higher.

![Unemployment Rates by Educational Attainment](chart.png)

Source: U.S. Department of Labor, Bureau of Labor Statistics
Geographic Profile of Employment and Unemployment 2011

As it relates to income and the risk of unemployment, the old saying “education pays” is still accurate. Missouri data for 2011 illustrates how having “Some College or an Associate Degree” versus only a High School diploma, lowers the unemployment rate by 2.2 points and provides about $4,460 in average extra earnings. A Bachelor’s degree or higher further shrinks the unemployment rate and boosts earnings.

### Missouri Unemployment Rates and Earnings by Education

<table>
<thead>
<tr>
<th>Missouri Unemployment Rates and Earnings by Education</th>
<th>Educational Attainment</th>
<th>Median Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.7%</td>
<td>Less than High School Graduate</td>
<td>$18,165</td>
</tr>
<tr>
<td>10.0%</td>
<td>High School Graduate or GED</td>
<td>$25,921</td>
</tr>
<tr>
<td>7.8%</td>
<td>Some College or Associate’s Degree</td>
<td>$30,564</td>
</tr>
<tr>
<td>3.5%</td>
<td>Bachelor’s Degree or Higher</td>
<td>$48,205*</td>
</tr>
</tbody>
</table>

*Average of Median Earnings for Bachelor ($42,271) and Graduate ($54,139)

Source: 2011 American Community Survey, U.S. Census Bureau
Although not unique to St. Louis, these distinctions in unemployment help to convey the broader story of who are most impacted by a tight job market. Finding employment has obviously been more difficult for both the young and/or less educated job seeker.

**Workforce Characteristics**

Representing 24.2 percent of the workforce, the majority of the job holders were aged 25-34 in 2012. Workers 45-54 comprised 23.3 percent of the employed workforce.

*Source: U.S. Census Bureau, Local Employment Household Dynamics program*

As the chart below shows, the St. Louis age profile has changed over time. In 1996, workers aged 45 to 54 represented almost 19 percent of the workforce while those 24 and younger accounted for just over 16 percent of all job holders. The age group of 55 to 64 had the most significant growth over the sixteen year period. St. Louis mirrors the national trend of an aging workforce that has increased the need for workers in the healthcare sector and raised concerns of large numbers of retirees leaving the workforce in the near future.

*Source: U.S. Census Bureau, Local Employment Household Dynamics program*
**Education Attainment**

Half of the region’s 25 years and older population have a high school diploma but have no post-secondary degree. Thirty nine percent of the remaining population have an Associate degree or higher. Ten percent of the population has no high school diploma or equivalent measure.

*Source: 2011 American Community Survey, U.S. Census Bureau*

**Current Job Demand**

Job openings are always available, in good times and bad. Companies will still need to fill gaps from retiring workers as well as positions opened through turnover and promotions even during slower economic times.

Tracking job postings is one way to measure current employment demand. The most advertised job openings in the St. Louis metropolitan statistical area from June 2012 to June 2013, grouped by typical education or training needed, is listed in the table.

Applications Software Developers (4,961) was the top advertised job opening overall followed by Wholesale and Manufacturing Sales Representatives and

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**Top Ten Job Advertisements in the Past Year**

<table>
<thead>
<tr>
<th>Short to Moderate-Term Training</th>
<th>Online Job Ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales, Wholesale And Mfgr. Except Tech. And Sci. Products</td>
<td>3,896</td>
</tr>
<tr>
<td>Retail Salesperson</td>
<td>3,185</td>
</tr>
<tr>
<td>Customer Service Representatives</td>
<td>2,397</td>
</tr>
<tr>
<td>Secretaries And Admin. Assistants</td>
<td>1,479</td>
</tr>
<tr>
<td>Computer User Support Specialists</td>
<td>1,381</td>
</tr>
<tr>
<td>Maintenance And Repair Workers, General</td>
<td>1,185</td>
</tr>
<tr>
<td>Laborers And Freight, Stock, And Material Movers, Hand</td>
<td>910</td>
</tr>
<tr>
<td>Bookkeeping, Accounting, And Auditing Clerks</td>
<td>861</td>
</tr>
<tr>
<td>Combined Food Prep. And Serving Workers, Including Fast Food</td>
<td>804</td>
</tr>
<tr>
<td>Tellers</td>
<td>770</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-Term Training to Associate Degree</th>
<th>Online Job Ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurses</td>
<td>1,640</td>
</tr>
<tr>
<td>First-Line Supervisors Of Retail Sales Workers</td>
<td>2,402</td>
</tr>
<tr>
<td>Heavy And Tractor-Trailer Truck Drivers</td>
<td>2,087</td>
</tr>
<tr>
<td>Managers, All Other</td>
<td>1,567</td>
</tr>
<tr>
<td>General And Operations Managers</td>
<td>1,401</td>
</tr>
<tr>
<td>First-Line Supervisors Of Food Preparation And Serving Workers</td>
<td>1,382</td>
</tr>
<tr>
<td>First-Line Supervisors Of Office And Administrative Support Workers</td>
<td>926</td>
</tr>
<tr>
<td>Nursing Assistants</td>
<td>788</td>
</tr>
<tr>
<td>Food Service Managers</td>
<td>701</td>
</tr>
<tr>
<td>Medical Records And Health Information Technicians</td>
<td>646</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bachelor's Degree or Higher</th>
<th>Online Job Ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Developers, Applications</td>
<td>4,961</td>
</tr>
<tr>
<td>Computer Systems Analysts</td>
<td>2,819</td>
</tr>
<tr>
<td>Sales Managers</td>
<td>2,001</td>
</tr>
<tr>
<td>Medical And Health Services Managers</td>
<td>1,971</td>
</tr>
<tr>
<td>Human Resources Specialists</td>
<td>1,539</td>
</tr>
<tr>
<td>Management Analysts</td>
<td>1,332</td>
</tr>
<tr>
<td>Network And Computer Systems Administrators</td>
<td>1,331</td>
</tr>
<tr>
<td>Accountants</td>
<td>1,310</td>
</tr>
<tr>
<td>Marketing Managers</td>
<td>1,187</td>
</tr>
<tr>
<td>Business Intelligence Analysts</td>
<td>1,083</td>
</tr>
</tbody>
</table>

*Source: Online Job Ads from June 2012 - June 2013. Burning Glass Technology.*
Registered Nurses. Many of the top jobs listed are in information technology, healthcare, sales, or logistics.

**Current Job Demand for Certificates**

The top certificates requested by employers in job advertisements over the past year are displayed in the table below. As the table shows, certificates are often associated with certain occupations or group of related jobs, such as Registered Nurse or Certified Public Accountant.

### Top 30 Certificates in Greatest Demand in St. Louis Metro Area

<table>
<thead>
<tr>
<th>Description</th>
<th>Certificates</th>
<th>STLCC Related Program</th>
<th>Credit/Non-Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurse</td>
<td>4,037</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>Certified Public Accountant</td>
<td>2,107</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Commercial Driver's License</td>
<td>1,391</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>First Aid CPR AED</td>
<td>1,265</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Project Management Certification (E.G. PMP)</td>
<td>1,103</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Series 7 Financial</td>
<td>642</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Certified Nursing Assistant</td>
<td>636</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Basic Cardiac Life Support Certification</td>
<td>506</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Certified Information Systems</td>
<td>494</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>488</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Security+</td>
<td>484</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Advanced Cardiac Life Support (ACLS) Certification</td>
<td>443</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>CISCO Certified Network Associate</td>
<td>440</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>ServSafe</td>
<td>414</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Certified Information Systems Auditor (CISA)</td>
<td>380</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Microsoft Certified Systems Engineer (MSCE)</td>
<td>356</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>IT Infrastructure Library</td>
<td>328</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>COSCP Certified Network Professional (CCNP)</td>
<td>326</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>Automotive Service Excellence (ASE) Certification</td>
<td>325</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>Insurance Agent Certification</td>
<td>316</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Six Sigma Certification</td>
<td>298</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>Casino Gaming License</td>
<td>294</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Personal Care Assistant</td>
<td>292</td>
<td>Yes</td>
<td>Non-Credit</td>
</tr>
<tr>
<td>Chartered Financial Analyst (CFA)</td>
<td>275</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Emergency Medical Technician</td>
<td>270</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>Professional Engineer</td>
<td>241</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Registered Health Information Technician</td>
<td>239</td>
<td>Yes</td>
<td>Credit</td>
</tr>
<tr>
<td>Forklift Operator Certification</td>
<td>233</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Certified Professional Coder</td>
<td>220</td>
<td>Yes</td>
<td>Credit</td>
</tr>
</tbody>
</table>
Many healthcare and information technology related certificates are in the top 30, such as Registered Nurse, CPR, and Certified Information Systems. This corresponds with the increasing demand for workers in these sectors.

These certificates may be obtained through short-term training or through courses offered at a community college.

**Current Job Demand for Skills**

To better understand the basic and specialized skills in greatest demand in the St. Louis metro area over the past year, a skill analysis was conducted. Found in the majority of job advertisements, basic skills was the most frequently requested skill. Many soft skills, such as communication, organization and customer service, rank in the top ten, with communications being the most demanded basic skill. In addition, according to recent job postings, computer skills, such as Microsoft Excel and Office, once thought to be advanced skills are now widely considered a basic skill.

### Top Ten Specialized Skills in Greatest Demand

<table>
<thead>
<tr>
<th>Specialized Skills</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1</td>
</tr>
<tr>
<td>Accounting</td>
<td>2</td>
</tr>
<tr>
<td>Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>SQL</td>
<td>4</td>
</tr>
<tr>
<td>Repair</td>
<td>5</td>
</tr>
<tr>
<td>Oracle</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>7</td>
</tr>
<tr>
<td>Patient Care</td>
<td>8</td>
</tr>
<tr>
<td>Product Sale &amp; Delivery</td>
<td>9</td>
</tr>
<tr>
<td>Business Process</td>
<td>10</td>
</tr>
</tbody>
</table>

**Source:** Online Job Ads from June 2012 – June 2013. Burning Glass Technologies.

### Top Ten Basic Skills in Greatest Demand

<table>
<thead>
<tr>
<th>Basic Skills</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>1</td>
</tr>
<tr>
<td>Organizational Skills</td>
<td>2</td>
</tr>
<tr>
<td>Writing</td>
<td>3</td>
</tr>
<tr>
<td>Leadership</td>
<td>4</td>
</tr>
<tr>
<td>Customer Service</td>
<td>5</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>6</td>
</tr>
<tr>
<td>Microsoft Excel</td>
<td>7</td>
</tr>
<tr>
<td>Planning</td>
<td>8</td>
</tr>
<tr>
<td>Microsoft Office</td>
<td>9</td>
</tr>
<tr>
<td>Management</td>
<td>10</td>
</tr>
</tbody>
</table>

**Source:** Online Job Ads from June 2012 – June 2013. Burning Glass Technologies.

The job postings reflected that the number one specialized skill is sales, followed by accounting. Since Sales Representative was the number one job postings from the past year, this specialized skill is understandable.
**Education Needed**

In the St. Louis area, employment requiring at least an Associate degree will see the largest percentage growth over the long-term at nearly 12 percent. This compares to an overall growth rate of 6.9 percent for all occupations. Second in percentage growth are jobs that require at least a Bachelor’s degree followed third by long-term On-the-Job Training.

Source: Long-Term Occupational Projections 2010-2020, St. Louis Workforce Investment Areas, MERIC
EMPLOYER SURVEY

The 2013 employer survey is the fifth annual telephone survey of approximately 1,200 local companies in the St. Louis metropolitan area. The intent of this survey is to understand the business climate, hiring trends and occupational skills and demands from businesses in the St. Louis region. Case study interviews were also conducted with six local employers to further investigate the challenges faced when searching for new workers and the most important technical and soft skills required for their employees.

St. Louis MSA Employer Survey Participants Map
Hiring Trends

Past Year

When asked if their employment levels changed over the past 12 months, over half (53%) of survey respondents indicated that it had remained the same. As compared to 2012 the number reporting a decreased employment level dropped significantly from 17.8% to 13.1% while the number reporting an increased employment level rose from 31.6% to 33.6%.

Future Plans

When asked about employment levels over the next 12 months, most employers (57%) indicated that they expected levels to remain the same. At the same time, the number of employers expecting to decrease employment levels dropped from 6.8% in the 2012 report to 4.4% for this year’s report. The number of employers expecting to increase employment rose from 33.1% in the 2012 report to 38.6% this year.

The number of employers who expected employment levels to increase from the 2012 report (33.1%) tracked closely with the number of employers who reported in 2013 that employment levels had increased in the past 12 months (33%).

In summary, employers remain cautious but there is steady growth in the number of employers who expect increasing employment levels, at least slightly, while the number of employers who anticipate decreasing their workforce is shrinking.
Workforce Retirements

Another driver of employment and hiring is the rate of expected retirements. We know that the largest growth over the last several years in any age cohort in the workforce is the 55-64 cohort. This has significant implications for the talent pipeline as well as the healthcare sector. The 2013 survey asked employers if they have employees expected to retire in the next year, three years and five years. Approximately 49% of employers responding indicated that they have employees expected to retire during the next five years, the highest frequency of response. Of the number of employers expecting retirements within five years, 6% indicated that they expected between 26% and 100% of their workforce would retire in that period.

Percent of Employers Expecting Retirements Within 1, 3 & 5 Years

- During the next 5 years: 49%
- During the next 3 years: 45%
- During the next year: 29%

Business Insight

The St. Louis Airport Authority (SLAA) employs approximately 540 individuals. The Airport Authority is responsible for airfield operations and maintenance, as well as the overall operations, maintenance and management of Lambert Airport. Aside from the management team, employees include: police, firefighters, electricians, automotive maintenance, industrial maintenance, engineers, airfield support/maintenance, and operations center technical center staff.

“Overall employment levels are expected to remain constant over the next 12-18 months although issues related to an aging workforce are being closely monitored. The Airport Authority is currently developing a workforce succession plan with an eye toward its aging workforce and the future need to secure replacement employees.”

St. Louis Airport Authority
For employers expecting retirements within 1, 3 and 5 years, the following charts show the percent of the workforce anticipated to retire.
**Adding Employees**

When employers were asked how they would add workers during the next 12 months, 71% responded that they would hire full-time workers, an increase from the 65% who responded in 2012. This is the highest response since the survey began, possibly representing increased optimism about the economy. The number of employers indicating that they would be hiring part-time workers declined slightly from 65% in 2012 to 63% in this year’s report. Although much lower than direct hires, the number of employers using contract employees and temporary agencies was significant with 19% and 18% respectively reporting using those methods. This raises the question as to whether there is a bifurcated strategy by employers to hire the most skilled workers as full time employees while using temporary agencies or hiring contract employees for lower skilled jobs, and specialized functions.
Benefits Offered

When employers were asked about the benefits and financial incentives offered to their employees, 90% responded that they offered paid vacations and holidays and 81% responded that they offered medical insurance. These responses were almost identical to those in the 2012 report. The 81% of employers offering medical insurance tracks well with figures cited in the recent debate over the Affordable Care Act. A majority of employers responding continue to offer 401k retirement programs. Four in ten employers offer tuition reimbursement, identical to the response rate in the 2012 survey.

![Benefits and Incentives Chart]

- Paid Vacation and holidays: 90%
- Medical insurance: 81%
- 401K including SAR/SEP: 58%
- Tuition Reimbursement: 40%
- Pension Program: 36%
- Other: 15%
- Other benefits or training options: 11%
**Impact of the Affordable Care Act on Employment and Benefits**

Much uncertainty revolves around the implementation of the Affordable Care Act (ACA) and its potential impact on both employment levels and status, i.e. full-time or part-time. Employers were asked if they expected the ACA to have an impact on their hiring of full or part-time employees and the number of employees to whom they offered health insurance. On July 2, 2013 President Obama announced the delay of the employer mandate portion of the law. This was during the period of the survey and may have affected some employers’ responses to these questions.

Nearly 60% of employers responding indicated that their level of employment of full and part-time employees would remain the same as would the number of employees to whom they offered health insurance despite the implementation of the Affordable Care Act. Between 22% and 26% of employers, depending on the question, responded that they didn’t know the impact or refused to answer the question. These findings are, in part, supported by a 2013 survey conducted by the International Foundation of Employee Benefit Plans which found that “Few organizations are changing their workforce hiring or reduction strategies as a result of ACA, but 16% are adjusting or plan to adjust hours so fewer employees qualify as full-time.”
Clearly the implementation of the ACA is driving some level of uncertainty, but the majority of employers are reflecting that it will not impact their decisions about employment levels or health benefits.
**Education and Experience Needs**

Just as employers are increasing their experience requirements to maintain their productivity, they are also increasing the educational requirements for their positions. When employers were asked if they had positions requiring various levels of education, 61% responded that they had positions requiring a high school diploma or GED, the most frequent response. This is expected due to the large number of low paying service jobs in the economy. However, that response rate was less than reported in 2012 (64%). Of those employers reporting that they had positions needing only a high school degree, only 24% reported having more than 50% of their positions requiring that education level. At the same time, 55% of employers reported having jobs that require Bachelor’s degrees, an increase from the 47% who responded in 2012. Of the employers reporting having positions that require a Bachelor’s degree, 16% reported having more than 50% of their positions with that requirement. In fact, the percentage of employers reporting that they had jobs requiring high school and less than high school decreased from 2012 while the number reporting that they had jobs in all other educational levels beyond high school increased from 2012 to 2013.

In part, employers may be signaling their ability to be more selective by ratcheting up education requirements to take advantage of a slack labor market. At the same time, data shows that the education levels for jobs requiring education beyond high school is growing. A study by Georgetown University’s Center on Education and the Workforce titled “Recovery: Job Growth and Education Requirements through 2020,” states that by 2020 65% of all jobs in the economy will require post-secondary education beyond high school. As the nation moves to a knowledge economy, the growth in educational requirements for jobs appears inevitable.

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**Business Insight**

Precision Prototyping & Manufacturing (PPM) provides manufacturing services related to water jet cutting, press brake, aircraft sheet metal and assembly. Secondary operations include de-burring, light machining and surface finish processes. PPM primarily focuses on the aerospace industry, but is currently working to diversify its customer base. PPM employs approximately 30 individuals.

“We don’t have a lot of employees, so when we hire someone we need to know that they have the necessary experience and a solid work history. We need people who are self-confident, respect themselves and respect the fact that they are being paid to do a good job.”
For employers who reported having positions with various education level requirements, the tables below break out the percentage of their workforce at each level.

### Levels of Education Required for Job Positions

<table>
<thead>
<tr>
<th>Education Level</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral degree</td>
<td>16%</td>
<td>8%</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>21%</td>
<td>17%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>55%</td>
<td>47%</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>39%</td>
<td>33%</td>
</tr>
<tr>
<td>Post Secondary Credentials</td>
<td>36%</td>
<td>28%</td>
</tr>
<tr>
<td>High School/GED</td>
<td>61%</td>
<td>64%</td>
</tr>
<tr>
<td>≤ High School</td>
<td>17%</td>
<td>22%</td>
</tr>
</tbody>
</table>

### Doctoral Degree

<table>
<thead>
<tr>
<th>Percentage</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 - 100%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>50 but &lt; 75%</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>25 but &lt; 50%</td>
<td>3.0%</td>
<td></td>
</tr>
<tr>
<td>1 but &lt; 25%</td>
<td>10.3%</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>84.3%</td>
<td></td>
</tr>
</tbody>
</table>
### Post Secondary Credentials

<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 - 100%</td>
<td>4.6%</td>
</tr>
<tr>
<td>50 but &lt; 75%</td>
<td>5.6%</td>
</tr>
<tr>
<td>25 but &lt; 50%</td>
<td>6.7%</td>
</tr>
<tr>
<td>1 but &lt; 25%</td>
<td>15.9%</td>
</tr>
<tr>
<td>None</td>
<td>63.3%</td>
</tr>
</tbody>
</table>

### High School / GED

<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 - 100%</td>
<td>11.8%</td>
</tr>
<tr>
<td>50 but &lt; 75%</td>
<td>12.2%</td>
</tr>
<tr>
<td>25 but &lt; 50%</td>
<td>9.1%</td>
</tr>
<tr>
<td>1 but &lt; 25%</td>
<td>14.7%</td>
</tr>
<tr>
<td>None</td>
<td>37.8%</td>
</tr>
</tbody>
</table>

### Less than High School

<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 - 100%</td>
<td>2.0%</td>
</tr>
<tr>
<td>50 but &lt; 75%</td>
<td>2.0%</td>
</tr>
<tr>
<td>25 but &lt; 50%</td>
<td>1.4%</td>
</tr>
<tr>
<td>1 but &lt; 25%</td>
<td>5.5%</td>
</tr>
<tr>
<td>None</td>
<td>82.5%</td>
</tr>
</tbody>
</table>
As the economy recovers, job seekers are re-entering the labor market and finding that the experience level required by employers has increased as well. As employers attempt to maintain productivity gains through the use of technology, they require skilled and experienced knowledge workers. As in past surveys, the 2013 survey asked employers if they had positions requiring various levels of experience. Approximately 64% of employers reported having positions requiring four or more years of experience, an increase from the 60% that reported that level in 2012. Of the employers having positions requiring four or more years of experience, over 23% reported that 50% or more of their jobs required that experience level. Conversely, only 39% of employers responding reported having positions that required no experience, a decrease from the 48% that reported that level in 2012. Of the employers having positions that did not require experience, only about 9% reported having 50% or more of their positions that required no experience. The increase in experience requirements may reflect the employer’s ability to be more selective in their hiring process but may also signal the need for more experienced knowledge workers.
For employers who reported having positions with various experience level requirements, the tables below break out the percentage of their workforce at each level.
Barriers to Expanding Employment

There were few changes from the 2012 report in terms of the primary barriers to expanding employment: economic conditions, government policies and shortage of workers with knowledge or skills. The number of employers citing economic conditions dropped slightly from 52% in 2012 to 50% in this year’s report. Employers indicating that government policies and regulations were a barrier remain nearly unchanged from 2012 to 2013 (36% to 37%). The most significant change was the number of employers responding that the shortage of workers with knowledge or skills was a barrier. That number increased from 33% to 38% from 2012 to 2013. For the first time since the survey began, the shortage of workers with knowledge or skills is the most cited barrier to expanding employment after general economic conditions. As the economy has improved, the gap between the most cited barrier, economic conditions, and the shortage of workers with knowledge or skills has decreased from a difference of 27% in 2011 to only 12% in this year’s report. To an extent, the shortage of workers needed by employers to address a growing knowledge economy has been masked by the more immediate challenges of economic conditions and government policies. As the economy continues to recover, this challenge will move to the forefront.
Finding Skilled Workers:  
Shortcomings of Job Applicants

When employers were asked about the shortcomings of recent job applicants, if any, their responses were remarkably similar to responses from 2011 and 2012. Lack of communication and interpersonal skills, poor work ethic, lack of critical thinking and problem solving, and general knowledge of business and industry received the highest response rate in 2013 and fell in the same rank order as in all previous years of the survey. This response is validated by the findings of a review of online job ads from June 2012 to June, 2013 which found that communications ranked as the top basic skill in greatest demand. A new response choice “inability to think creatively,” otherwise known as thinking outside the box, was added in 2013 and the response to that choice fell to fifth in the rank order with 45.7% of employers responding that it was a shortcoming they noted.

“Soft skills” once again far outpaced technical skills such as math and computer skills as the most lacking in the workforce. Less than one in ten employers found no significant shortcomings in their job applicants. The good news of this response is that employers, by and large, feel that job applicants have obtained technical skills. The challenge for training providers is integrating soft skills into training programs.

Business Insight

NewLeaf Symbiotics is a science-based company conducting cutting-edge research and product development using naturally occurring beneficial plant bacteria. NewLeaf Symbiotics started in St. Louis in 2012 and is engaged in laboratory, greenhouse, and field product trials with an eye toward commercialization and license products in 2014.

NewLeaf reports that the talent pool for experienced individuals with advanced degrees, as well as for laboratory technicians is sufficient in the St. Louis area. “We hire very bright people, yet we require them to check their ego at the door. Of course we value an individual’s skills and abilities, but the goal is not for one person to succeed, it is for all of us to succeed. We need people who are action-oriented, willing to take risks, and have the capacity to continuously learn and develop.”

NewLeaf Symbiotics
Business Insight

TAGG Logistics is an order fulfillment and third-party logistics (3LP) provider focused on helping businesses cost-effectively handle their order fulfillment and distribution challenges. TAGG has operations in St. Louis, Missouri and Reno Nevada, with a combined workforce of approximately 60 employees. TAGG continues to expand and has experienced both client and employee growth for each of the last seven years.

“Attitude, willingness to learn and follow directions, and work ethic are the most important traits for this type of position. If they have those we can train them in the other skills, but you can’t train someone in work ethic.”

TAGG Logistics

“We want someone who recognizes the value of a job that includes health insurance.” PPM uses Craigslist to recruit for entry-level positions and usually doesn’t have problems securing applicants; however for every 30 applicants they might find one individual who fits their work ready description.”

Precision Prototyping & Manufacturing
**Finding Skilled Workers: Skills Shortages in Functional Areas**

In addition to being asked about the shortcomings of job applicants, employers were asked whether they experienced skill shortages in certain functional areas. As in 2012, customer service was the functional area that received the most responses from employers (21%) as having a skills shortage, an increase from the 17% in 2012.

<table>
<thead>
<tr>
<th>Functional Area</th>
<th>2013 %</th>
<th>2012 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service</td>
<td>20.5%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Skilled Trades</td>
<td>19.1%</td>
<td></td>
</tr>
<tr>
<td>Information Technology</td>
<td>18.5%</td>
<td></td>
</tr>
<tr>
<td>Business Management</td>
<td>14.4%</td>
<td></td>
</tr>
<tr>
<td>Other*</td>
<td>10.3%</td>
<td></td>
</tr>
<tr>
<td>Accounting / Finance*</td>
<td>9.1%</td>
<td></td>
</tr>
<tr>
<td>Patient Care*</td>
<td>6.7%</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>6.5%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

This was followed closely by skilled trades and information technology both ranked at approximately 19% of employers responding. In each
of these three areas the number of employers reporting a skill shortage increased significantly from the 2012 survey. It is possible that the increase in skilled trades is a result of the pick-up of employment in construction.

For 2013 employers were asked additional questions about their opinions on the reasons for these skill shortages. For all functional areas except information technology, a lack of qualified new graduates in the discipline was cited most often by employers as the most important reason (between 36% and 48% depending upon the functional area). For information technology 41% of employers cited rapidly changing technology and business environment as compared to 31% for qualified graduates. Increased competition for qualified graduates garnered a significant response rate for Patient Care (32%) and Engineering (28%).

<table>
<thead>
<tr>
<th>Reasons for skill shortage</th>
<th>Customer Service</th>
<th>Skilled trades</th>
<th>Inform. Tech.</th>
<th>Business Management</th>
<th>Accounting/finance</th>
<th>Patient Care</th>
<th>Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of qualified new graduates in the discipline</td>
<td>41%</td>
<td>48%</td>
<td>33%</td>
<td>36%</td>
<td>41%</td>
<td>40%</td>
<td>45%</td>
</tr>
<tr>
<td>Rapidly changing technology and business environment</td>
<td>20%</td>
<td>17%</td>
<td>41%</td>
<td>18%</td>
<td>20%</td>
<td>12%</td>
<td>21%</td>
</tr>
<tr>
<td>Increased competition for qualified graduates</td>
<td>17%</td>
<td>24%</td>
<td>25%</td>
<td>21%</td>
<td>17%</td>
<td>32%</td>
<td>28%</td>
</tr>
<tr>
<td>Prohibitive cost of training existing workforce</td>
<td>24%</td>
<td>16%</td>
<td>25%</td>
<td>21%</td>
<td>24%</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>Others</td>
<td>36%</td>
<td>36%</td>
<td>35%</td>
<td>42%</td>
<td>36%</td>
<td>43%</td>
<td>25%</td>
</tr>
</tbody>
</table>
**Finding Skilled Workers: Addressing Company Skill Shortages**

As employers inevitably encounter skill shortages in their applicant pools they are required to make some hard choices to maintain a talent pipeline for their business. When asked what measures they were taking to meet these shortages and avoid an impact on their company’s productivity, 70% indicated that they were forced to hire less experienced workers and train them. Although this is the most frequent response, it is down from 76% of employers responding in that way in last year’s survey. At the same time, the employers who responded that they were hiring outside the region increased from 24% in 2012 to 28% in 2013 and the number of employers hiring contractors increased from 21% to 28%. It appears that employers are taking advantage of the slack labor market which gives them the opportunity to hire and fire quickly allowing them to adjust to changing market demands and opportunities. The number of employers who cited paying higher wages to attract experienced workers remained constant in 2013 as compared to 2012 (35% to 34%).

### Addressing Skill Shortages

<table>
<thead>
<tr>
<th>Measure</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forced to hire less experienced workers and train them</td>
<td>70%</td>
<td>76%</td>
</tr>
<tr>
<td>Offering higher wages due to experience worker shortage</td>
<td>35%</td>
<td>34%</td>
</tr>
<tr>
<td>Hiring from outside the region</td>
<td>28%</td>
<td>24%</td>
</tr>
<tr>
<td>Hiring contractors</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>Hiring from outside the US</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Business Insight**

Edward Jones has more than seven million investors and employs approximately 35,000 people. More than 5,000 of those employees are located in the St. Louis area. Financial Services is a growth industry and Edward Jones is growing. Last year, Edward Jones filled 900 openings and they are on pace to hire another 900 employees during 2013. In a given year, Edward Jones will receive nearly 500,000 resumes and processing that volume is challenging. They are adding both new hires and developing organizational depth by promoting from within and then filling positions as a result of the promotions. Key hiring areas include: Financial Advisors, Administrative Support, Information Systems/Technology, Accounting and Call Center Staff.

“Finding experienced and skilled IT staff continues to challenge recruiters. Emerging software applications results in an ongoing and specific need for Oracle, JavaScript and Oracle WebLogic developers. Also, finding experienced and skilled IT staff for data security challenges can be problematic.”

*Edward Jones*
Finding Skilled Workers: Methods of Skill Acquisition

With employers continuing to have to hire and train less experienced workers, the methods that are used to help workers acquire skills becomes a strategic decision. For the third consecutive year, on-the-job training was the most cited method of skill acquisition with over 90% of employers using that method, far outpacing the next most cited response, in-house classroom training, at 63% in this year’s report. Vendor training and hiring only workers who are already trained are the next most frequent choices. Hiring only workers who are already trained increased from 35% in 2012 to 39% in 2013 possibly indicating continued slack in the labor market. This has allowed employers to be very selective and, for some, to wait for the perfect applicant. Some recruiting websites (e.g. ERE.net and Recruiter.com) have referred to these individuals as “purple squirrels” due to their uniqueness from others in the applicant pool.

Business Insight

“St. Louis Community College has been a great partner for us. We are involved in their aerospace and manufacturing technology advisory board. Those types of advisory board meetings are a good idea, but if we have a sense that a college isn’t paying attention to our needs and what we have to offer we stop attending. That just isn’t the case with St. Louis (Community College).”

Precision Prototyping & Manufacturing

“Our partnership with St. Louis Community College to acquire space and talent at BRDG Park has been especially helpful. The partnership with St. Louis Community College has been great and really was a pleasant surprise. Such partnerships for us and other bio-technology companies can help solidify St. Louis as an attractive location for Plant Science and Biotechnology development.”

NewLeaf Symbiotic
For the second year, employers had the opportunity to choose online courses and a significant number, 35% in this year’s report, cited that as a method. For the first time on the employer survey, tuition reimbursement was listed as a method of skill acquisition and a significant number of employers, 34%, selected that response.
Measures of Employer Value: Degrees or Experience?

There has been much anecdotal evidence, as well as reviews of online job announcements, that experienced candidates hold a decisive advantage in obtaining employment. For the first time, the State of the St. Louis Workforce survey attempted to validate this. Employers were asked “When making a hiring decision for an open position, how would you evaluate a new graduate with the latest academic technique/skills training but no experience in the field versus an applicant with extensive experience in the field (5-10 years) but lacking the most recent academic technique/skills training?” Nearly one-half of employers responding indicated that they would favor the experienced applicant. About one-third indicated that they would favor both candidates equally while only about one in ten responded that they would favor the new graduate. This response would seem to validate the concept that “Experience Matters.”

New Graduate with Latest Skills vs. Experienced Applicant Lacking Latest Skills

- Favor Graduate: 11%
- View Equally: 34%
- Favor Experienced Applicant: 48%
- Don’t Know: 7%

Business Insight

“Experience trumps everything, including the degree and educational background. Applicants are dismissed from the pool if they do not have the appropriate certification (or cannot acquire the appropriate certifications). When searching for new talent, Edward Jones relies heavily on referrals and recruits experienced people.”

Edward Jones

“Depending on the position, educational level and experience play different roles; however experience in an airport environment carries significant value.”

St. Louis Airport Authority
**Measures of Employer Value: Degrees or Industry Recognized Certificates?**

Employers are increasingly faced with a variety of ways to value and validate the skills of job applicants. The credential movement is growing rapidly as industry associations and professional organizations are moving to third party evaluations to validate specific skills.

A 2012 study conducted by Georgetown University’s Center on Education and the Workforce cites the fact that “Certificates have swelled to become the second most common postsecondary award in the U.S. Over 1 million are awarded each year. Trailing only Bachelor’s degrees, certificates have now superseded Associate and Master’s degrees.”

A 2011 survey of human resource professionals on workforce competencies that employers value was conducted by the St. Louis Regional Chamber Association and the Human Resource Management Association. The survey found that industry recognized credentials ranked higher than all post-secondary credentials except a Bachelor’s degree.

These credentials are sometimes embedded in formal educational programs but many can be earned through more non-traditional formats. In this survey, employers were asked: “When making a hiring decision for an open position, how would you evaluate the following credentials: An industry recognized certificate related to the specific requirements of the job versus the following position related degrees - Associate degree, Bachelor’s degree, Advanced degree?”

Employers favored the industry certificate (24%) over the Associate degree level (17%). At that level over four in ten employers responded that they would favor the certificate equally with the degree. This was not the case at higher degree levels. At the Bachelor’s degree level, employers favored the degree over the industry certificate by over a two to one margin while at the advanced degree level employers favored the degree over the certificate by a three to one margin.

**Business Insight**

Edward Jones values college degrees, both for content and because it reveals that a person is a “completer.” “The completion of the degree is important to us because it tends to reveal that a person is well-rounded, more mature, and can complete what they start.”

_Edward Jones_
Between 29% and 44% of employers, depending on the level of the degree, responded that they viewed the certificate and degree equally.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Favor Degree</th>
<th>Equal</th>
<th>Favor Certificate</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associates Degree</td>
<td>17%</td>
<td>44%</td>
<td>24%</td>
<td>15%</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>36%</td>
<td>34%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>39%</td>
<td>29%</td>
<td>13%</td>
<td>19%</td>
</tr>
</tbody>
</table>

The survey results would suggest that the industry certificate movement, while significant, does not replace degrees, particularly advanced degrees.

**Business Insight**

“…for positions which require education beyond high school, a degree is valued more than short-term credentials, although specific certifications and credentials do carry weight in areas associated with automotive and mechanical positions.”

*St. Louis Airport Authority*
Bachelor's Degree vs. Industry Recognized Certificate

- Don't know/Refused: 15%
- Favor the Bachelor's degree: 36%
- View the credentials equally: 34%
- Favor the certificate: 15%

Advanced Degree vs. Industry Recognized Certificate

- Don't know/Refused: 19%
- Favor the advanced degree: 39%
- View the credentials equally: 29%
- Favor the certificate: 13%
Measures of Employer Value: Online or Traditional Degrees?

There has been a proliferation of educational options for students and job seekers, but none has had more impact than the growth of online degree programs. This is typically characterized by the rise of private, for profit, online providers like the University of Phoenix, but, it also includes new offerings by many, if not most, public higher education institutions and the evolution of Massive Open Online Courses (MOOCs). In the 2013 survey, employers were asked about their value of an online degree versus a traditional degree. The question asked employers to compare job candidates who have obtained their degree online versus job applicants with traditional degrees, for example, face to face and bricks and mortar. They were asked to make this comparison for entry-level, mid-career and advanced positions.

Less than 3% of employers responded that they favored the online degree over the traditional degree for any position level. However about half of the employers responding valued the online degree as favorably as the traditional degrees for entry- and mid-level positions and about four in ten employers considered it as favorable for advanced positions. Employers preferred traditional degrees over online degrees for advanced positions.

<table>
<thead>
<tr>
<th>Position Level</th>
<th>Online Degree Less Favorable</th>
<th>Equal</th>
<th>Online Degree More Favorable</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>37%</td>
<td>53%</td>
<td>2%</td>
<td>8%</td>
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<tr>
<td>Mid -Career</td>
<td>39%</td>
<td>48%</td>
<td>3%</td>
<td>11%</td>
</tr>
<tr>
<td>Advanced</td>
<td>45%</td>
<td>41%</td>
<td>3%</td>
<td>12%</td>
</tr>
</tbody>
</table>

A 2010 employer survey on the value of online versus traditional degrees was conducted by the Society for Human Resource Management. The survey found that more than one-third of organizations viewed candidates who have obtained their degrees online as favorably as job applicants with traditional degrees. In addition, the survey found that the higher the position in the organization, the less acceptable the online degree became.
**Employer Survey – Summary**

As the recession fades into the past and recovery takes hold, employer optimism continues to grow at a slow but steady pace. More employers plan to increase their employment levels and fewer plan to decrease their levels than in 2012. The majority of employers (57%) plan to maintain their current levels reflecting a bias towards caution.

Economic conditions continue to be cited most often as a barrier to expansion but the number of employers who reported this as a barrier is down sharply from the previous report. For the first time since the inception of the survey the shortage of workers with knowledge and skills has replaced government policies as the most cited barrier to expansion after economic conditions.

While employers continue to recognize substantial shortcomings in their applicant pools, a slack labor market has allowed them to be more selective in hiring. This is reflected in increasing experience and education requirements and in the number of employers reporting that they are hiring only workers who are already trained. These strategies are also necessitated by the need to acquire knowledge workers, those who can adequately function in a growing knowledge economy. Employers have both increased the number of full-time workers they plan to hire and increased their use of contract employees and temporary agencies possibly reflecting different strategies for securing high skill versus low skill and specialized workers.

Finally, this year’s survey attempted to gauge the premium that employers place on experience and the relative value of industry credentials and online degrees. Given a choice, employers would favor experience over a degree. They view online degrees and industry credentials as acceptable for entry-level and mid-level positions but favor a traditional degree for advanced positions.
COMMUNITY COLLEGE COMPLETERS
SURVEY AND FOCUS GROUP RESULTS

For the second year in a row as part of the research report, STLCC conducted a survey of recent community college graduates. This year over 180 STLCC program completers responded to the survey. In-depth focus groups of interested respondents were also held with student completers to provide the report with more color and context around the students’ experience.

Reasons for Enrolling in a Program

One of the most fundamental questions in the recent community college completer surveys is the reasons given for enrolling in a training program. The top three reasons remained in the same rank order as the 2012 survey. The leading response, “interest in the area of study” at 63% reflects virtually the same rate as 2012, followed by “perception that completion would create more stable employment” at 47%, a drop of over 10% from the previous year. The third most cited reason, “increase future salary potential” also declined from 41.8% in 2012 to 37% this year. The drop in the number of students responding that they enrolled because they expected more stable employment or increased salary potential may reflect that they are becoming more aware of the competitive labor market. In addition, the number who responded that they enrolled in a program in response to a lay off also declined significantly from 27.6% in 2012 to 15.3% possibly due to prospective adult students returning to the job market. Typically community college enrollment increases during an economic downturn and begins to decline as the economy recovers.
Being Prepared...for Learning

Focus Group Results

The students built strong relationships with these individuals and leveraged them to get through tough and trying times.

“I had instructors that were committed to me getting through. They were driven to do what it took to help me be successful. They gave freely of time before and after class. I was motivated by the sacrifice of instructors.”

Student Survey Results

A great number of students give a lot of credit for their success to dedicated professors/instructors. Many shared stories of professors/instructors that were absolutely driven to help students succeed. Those who taught made a difference by knowing the material well and checking for understanding while conveying information to students. Having access to the instructors and their knowledge and support was reported as a determining factor in student success.

Focus Group Results

Faculty, staff and advisors provided support that helped many of the completers to reach their goals. Often these individuals went the extra mile to provide more support than was contractually obligated. 51% of students responding to the 2013 completer survey reported accessing academic advising services, the most utilized service cited.

“My advisor helped me to get through. She worked to get me credit for work that I had done. She helped me to make the right choices and presented me with options to reach my goals. She seemed to care very much about my completion.”

Many prospective post-secondary students face significant academic deficiencies. Simply put, they are not ready to succeed. The degree to which these students can overcome these deficiencies in a timely

Training Insight

What works...A Strong Start

“Focusing attention on the front door of the college—ensuring that the students’ earliest contacts and first weeks incorporate experiences that will foster personal connections and enhance their chances of success— is a smart investment.”

A Matter of Degrees-Promising Practices for Community College Student Success, A First Look; Center for Community College Student Engagement (CCCSE) 2012.

What works...Clear Coherent Pathways

“The many choices and options students face as they endeavor to navigate through college systems can create unnecessary confusion—and inhibit students’ success. Colleges can improve student success (and manage ill-used time) by creating coherent pathways that help students move through an engaging collegiate experience.”

A Matter of Degrees-Promising Practices for Community College Student Success, A First Look; Center for Community College Student Engagement (CCCSE) 2012.
manner will determine their future success. The longer they spend in remedial activities the less the likelihood they will complete their program.

Upon entering their programs 85% of the students responding reported feeling strongly or somewhat prepared to do the work required by their program.

However 42% reported taking remedial or prerequisite courses necessary to successfully enroll in and complete their program of study. This was a slight decrease from the 49% reported in 2012. The majority of students reported having to take science (56%) and math (55%) courses. Of the students who took these courses, over eight out of ten agreed that the preparation they received provided the necessary foundation for success in their program with five out of ten strongly agreeing.

**Training Insight**

What works…Integrated Support

“Though students consistently identify academic planning and advising as the most important service offered at their college, only 41 percent of entering student respondents to the Survey of Entering Student Engagement (SENSE) report that an adviser helped them set academic goals and develop a plan to achieve them.”

*Designing New Academic Pathways, Kay McLenney and Donna Dare, Community College Journal, June/July 2013.*
Focus Group Results

Most of the students felt that preparation programs and prerequisites laid an important foundation for the learning that occurred in the program. For some, exposure to new information in the prerequisite or preparation courses improved their comfort level and proficiency when faced with challenges in their programs.

“More difficulties in the prep program made for an easier time in the real program. I didn’t like the idea of taking something extra, but I am glad that I did.”

The students built strong relationships with these individuals and leveraged them to get through tough and trying times.

“I discovered that I had a learning disability and applied for assistance through the Access Office. They made it possible for me to get extended time on exams and out of class testing. They gave me individual attention and advocated for me with instructors when necessary. I don’t think I would have made it through without their help.”

Training Insight

What works… High Expectations and High Support

“Students entering community colleges typically enroll with high aspirations… Too often, though, community colleges have emphasized college access… without designing systems to support their success. Higher education scholar Vincent Tinto famously asserts that “no one rises to low expectations” but he simultaneously affirms that high expectations without support constitute a hollow promise.”

Designing New Academic Pathways, Kay McClenny and Donna Dare, Community College Journal, June/July 2013.
Being Prepared...for Work

Past State of the St. Louis Workforce surveys as well as evidence from many other studies clearly point out that there are two (at least) dimensions to success in the workplace, technical skills and interpersonal skills. In addition there are skill sets necessary to successfully find a job. Students responding to the 2013 survey felt prepared in all these areas. Nearly 95% of the students responding felt that they were strongly or somewhat prepared in industry technical skills, a slight increase from 87% in 2012. The number of students who felt prepared in soft skills areas remained virtually unchanged from 2012 (92.1%) to 2013 (91.5%) although the percentage of students responding that they felt strongly prepared dropped from 66.9% in 2012 to 54.2% in 2013. Eight out of ten students felt prepared in interviewing skills. The perceptions of the students responding to this question differ significantly from the perceptions of employers who responded to this year’s employer survey. Nearly six in ten employers felt that job applicants were lacking in soft skills while four in ten felt that job applicants displayed shortcomings in technical skills. Although there may be differences between the program completers and the general applicant pool it is also likely that students aren’t fully aware of employers’ expectations.
Focus Group Results

Completers report an improvement in technical skills and an overall boost in confidence that they believe makes them better applicants and employees.

“I spent a semester working in a lab at a real company. I learned how a lab was organized and run while gaining lots of industry specific knowledge. When I started a real job, I was able to jump right it.”

Being Prepared... for Success

Being prepared for success includes the success in entering the workforce and in performance on the job. Of this years’ respondents 66% are working with 39% full time and 57% working in their chosen field of study. These figures are up slightly from those reported in last years’ survey (60% employed with 54% employed in the field of study). When survey respondents were asked how they connected to their employers the highest response rate, nearly 40% chose “Networking through the college, program or instructor.” An additional three in ten connected through referrals from family and friends with another three in ten connecting through advertisements.

While the student completers thought that they were prepared for the workforce they still believed they would face challenges in finding the right job. Starting pay offered continues to be the challenge most often cited at 32% this year but that rate is down sharply from the 47% cited in 2012. Issues
related to benefits were chosen by 27% of the respondents, an increase from the 17% who selected it in 2012. That choice may have been impacted by the uncertainty around the Affordable Care Act.

Program completers were also asked to characterize the feedback they received from employers about their skills. Across a range of skills (technical skills, soft skills, industry specific resume, and interviewing skills) between 71% and 88% of the students reported that they

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**Training Insight**

**What works…Intensive Student Engagement**

“Decades of research indicate that a key principle for design of effective educational practices and pathways is intentional and intensive student engagement…Simply put, the more students are actively involved with one another, faculty, staff, and the academic subject matter, the more likely they are to learn at higher levels, persist, and succeed in college.”

*Designing New Academic Pathways, Kay McAlleny and Donna Dare, Community College Journal, June/July 2013.*
received employer feedback indicating that they were strongly or somewhat prepared. The highest rates were for soft skills (86%) and technical skills (88%). When asked whether employment in their field met their expectations 94% reported that it had.

**Focus Group Results**

Students report a gain in some important soft skills as a result of completion.

“I really benefitted from being forced to work with others on a number of projects. I prefer to work alone and didn’t like it when they made me do it. I am better at my current job because of it. I manage and deal with people of all types of personalities better because of my group work in the program.”

Acquiring skills in the classroom is meaningless unless they can be applied on the job to improve individual and organizational performance. Students responding to this years’ survey overwhelmingly responded that they had used the skills attained through their program to improve performance on the job. Over 95% of the students responding agreed that they used the skills learned to improve on the job performance. Less than 2% disagreed. These results closely mirror those of the 2012 report.

Students report success on the job as a result of completion and have received positive performance feedback from employers and customers.

“When you go to a temporary agency they have you do a test to assess your skills. They were blown away by my scores. I can do anything that they need. It makes me more marketable.”
By a wide margin community college completers were satisfied with their choice of programs. Over eight in ten indicated that, given the opportunity, they would make the same program choice.
ACKNOWLEDGEMENTS

We would like to thank the businesses for their voluntary participation in the survey and case studies. We are especially grateful to those companies that participated in the in-depth interviews for sharing their time and insights for this report: AEP River Operations, Edward Jones, New Leaf Symbiotics, Precision Prototyping & Manufacturing, St. Louis Airport Authority and TAGG Logistics.

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SOURCES


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“Designing New Academic Pathways – Reimagining the community college experience with students’ needs and best interests at heart” Kay McClenny and Donna Dare, American Association of Community Colleges, Community College Journal, June/July 2013.
APPENDIX A: PROGRAM COMPLETION SURVEY 2013

Methodology

183 total respondents. 
Sent to all completers over previous year.

1) Which category below includes your age at the time you completed your program?

- People completing the programs are fairly evenly spread between the ages of 21 to 60.
- The greatest percentage of completers who completed the survey were between the ages of 31 -35 (19.3%).

2) What is your gender?

- Females comprised 69% of the completers surveyed (males, 31%).

3) Why did you enroll in your program (choose all that apply)?

- Most people (63%) enrolled in their chosen program following an interest in the area of study or the field.
- It is clear that other major factors in choosing a program came from the perception that completion would create more stable employment (47%) and increase future salary potential (37%), perhaps due to the opportunity to obtain licenses and certifications (32.8%).
- Some individuals 15.3% enrolled as a response to a lay off from work (12% fewer than reported in last year’s survey).
- Many were looking to take advantage of low cost training options (26.8%) with a direct link to reemployment (14.9%).

4) At which of the following STLCC locations did you complete your program?

Location of the completion of survey responders are represented below:

- Forest Park Campus – 34.4%
- Florissant Valley Campus – 26.8%
- Meramec Campus – 26.8%
• Center for Workforce Innovation – 5.5%
• MET Center – 4.4%
• Harrison Educational Center – 1.1%
• Wildwood Campus – 0.6%
• BRDG Park – 0.6%

5) What is the name of the program you completed?

Programs completed by survey participants are represented below by number of references:

Nursing (25)        Dietetic Technician (3)
Solar Photo Voltaics (15)  Electronic Engineering Technology (3)
Human Services (13)  Funeral Services Education (3)
Occupational Therapy Assistant (8)  Respiratory Therapy (3)
Graphic Communication (7)  Architecture Technology (1)
Water Treatment (7)  WITS Personal Training (3)
Business Technology Training (6)  Applied Science (2)
Culinary Arts (6)  Clinical Laboratory Technician (2)
Early Childhood Education (6)  Health Information Technology (2)
Paralegal (6)  Information Systems/Networking (2)
Certified Nurse Assistant (5)  Interior Design (2)
Accounting (4)  Medical Billing and Coding (2)
Applied Science (Pastry) (4)  Automotive Technology (1)
Criminal Justice (4)  Biomedical Engineering Technology (1)
Dental Hygiene (4)  Certificate of Specialty in Microcomputer Applications (1)
Horticulture (4)  Diesel Technology (1)
Phlebotomy (4)  Patient Care Technician (1)
Physical Therapy Assistant (4)  Software Development (1)
Bldg Inspection Code Enforcement (3)
Chemical Technology (3)

6) Please indicate which services/supports listed below were utilized by you in completing your program (check all that apply):

• Advising (51.4%) and Financial Aid (40.4%) departments were most referenced by completers as services utilized during their completion experience.

7) Looking back to the time you enrolled, how prepared were you to do the work that your training program required at the time you entered?
• 84% of the survey respondents felt prepared to enter their chosen training program at the time they began and more than half of those participants characterized their readiness as “strongly prepared.”

8) Did you participate in a program designed to prepare you for entrance into the program you completed? (remedial education or prerequisites)

• A significant number of survey respondents (42%) reported participation in some program that was designed to improve readiness success in their chosen program.

9) The preparation I completed focused on the following areas (check all that apply):

• Science (56.3%), Math (55%) and Reading/English (47.9%) were the main focus of the preparation programs completed by survey participants.
• English as a Second Language (5.6%)

10) The preparation program I participated in provided the necessary foundation for my success in the program:

• 73% of those who reported participation in a preparation program felt that it helped them build a necessary foundation for success in their chosen program.

11) Please indicate your current employment status:

• 66% of completers surveyed are currently working.
• 39% in full time positions (40 hours or more).

12) Are you currently employed in your field of study?

• Of participants currently employed, 57% are employed within their chosen field of study.

13) Employment in my field has, so far, been a good match with my expectations:

• 94% report a good match with their expectations of the work.

14) How did you connect with your employer?

• Networking through the college, program or instructor (22%) was the most common way that those working connected to their current employer
• Referrals from friends and family are a common way that those working connected with their current employers (17%).
• Others connected through advertisements (15.4%)
15) How would you characterize the feedback you have received from your employer regarding your level of preparedness on the job in the following areas:

- Less than 2% (1.5%) of respondents received feedback from employers in the field indicating that they were unprepared in the areas of technical industry skills, soft skills, interviewing skills and creating an industry specific resume following the completion of their program.

16) I have used the skills attained through my program to improve performance on the job:

- More than 95% of respondents report using skills learned in the program on the job to improve their overall performance.

17) After graduation, but before employment or furthering your education, are you intentionally taking time off?

- 35% of those reporting to be unemployed state that they are taking time off intentionally following the completion of their program.

18) What influenced you to make that choice?

- 85% of those who chose to take time off after graduation report that they did so as a personal choice, vs. as a response to the slow job market (14.3%).

19) How long do you expect to take off before beginning a job search or continuing your education:

- 100% of respondents who have intentionally taken a break expect to take off between 0-6 months before seeking employment.
- 0% of the intentionally unemployed expect to sit out between 1-2 years before beginning a job search or continuing their education compared to 22% of this group in last year’s survey.

20) I am confident that I will gain employment within my area of study within one year from the time that I begin an intense job search:

- 78% of respondents believe that they will gain employment in their area of study within one year of beginning an intensive job search.
- 8% believe that it may take longer than one year to gain employment in their chosen field.
21) Rate your personal feeling regarding the level of preparedness in the following areas upon completion of your program:

- More than 80% of respondents felt prepared in the areas of technical industry skills (95%), soft skills (91%), interviewing skills (81%) and creating an industry specific resume (86%) upon completion of their program.

22) Please indicate areas where you feel you will be challenged as you attempt to enter the workforce (check all that apply):

- 32.2% of respondents indicated that they would be challenged by the starting pay offered when trying to enter the workforce.
- Some (30.5%) felt that a lack of credentials or certificates would make the job search more difficult.
- 27.1% of completers believe that issues related to benefits will be a challenge as they attempt to enter the job market.
- Others (20.3%) felt that they could be held back by their limited technical skills.
- Some believed that the tight job market, combined with their age (too old), lack of experience or the amount of time that they have been out of the job would make their attempt to gain employment in their field difficult.

23) What is the biggest advantage that you have gained over others in the job market as a result of completing your program?

- Many participants believe that credentials, licenses or degrees will give them an edge over other applicants.
- Further, many believe that the technical skills and knowledge, combined with “hands on” experience in their chosen field will provide an advantage over many job seekers.
- A number of completers cite the increased confidence in working in their field and an overall sense of pride that resulted from their completion as a positive factor in their ability to interview for positions.

24) Please indicate your employment status (not including internships or practicum assignments) while you were in school/training:

- 68% of respondents worked while they completed their program. 48.2% worked at least 17 hours a week during the time that they completed.

25) Were you employed in your field of study during participation?
• 42% of those employed while they completed their program were employed within their industry.

26) What was the biggest contributing factor to the successful completion of your program?

• Overwhelmingly, completers cite their own personal drive and determination as the most important factor in making completion possible. This group leveraged the fact that they were able to use intrinsic motivation to spend long hours completing assignments and studying for quizzes and tests.

• Time management skills were cited as essential to completion. Even among those most determined, many believe that their past experience juggling responsibilities or skills in time management learned from their pasts were important to their successes in programs.

• A great number of students give a lot of credit for their success to dedicated professors/instructors. Many shared stories of professors/instructors that were absolutely driven to help students succeed. Those who taught made a difference by knowing the material well and checking for understanding while conveying information to students. Having access to the instructors and their knowledge and support was reported as a determining factor in student success.

• A significant number were able to leverage the support and encouragement of friends and family. Many referenced help with babysitting so that they could attend regularly. Some explained how a kind, supportive word from a friend or family member helped them get through difficult times. Many completers believe that they would have failed without the support of significant others.

• Students felt support from a variety of institutional forces. Some credit assistance from advisors with helping them to stay on track and make the right choices as they navigated through the system.

• Some felt that the fact that they were able to focus solely on the program was the greatest contributing factor in their ability to complete without the distraction of work. Some of these people cited family assistance, scholarship programs and/or financial aid as major contributing factors in their successful completion.

• A few credit flexible scheduling for helping them complete, describing situations where classes were offered at different times, allowing them to take a class they otherwise would have been unable to complete.

27) Please indicate how difficult a barrier the following areas were to the completion of your program:
• The need to work while attending and working through the program was viewed as the most difficult barrier to successful completion (61%).
• Conflicts related to the time/days of scheduled offerings may have been a resulting issue from the first barrier and was cited by 61% of respondents as at least a minor barrier to their successful completion.
• Costs of academic supplies (paper, pens, computer, etc…) were cited by 49% of students as at least a minor barrier to success as well.

28) Identify the biggest barrier to the completion of your program and describe how you were able to overcome it.

• Many completers cite the difficulties that they had in balancing the responsibilities of work, school and family. Most of these successful persons found that they were able to overcome these issues by employing strong planning skills and leveraging strong support systems.
• Many individuals were challenged by what they saw as limited class offerings. Some were challenged because classes they wanted were offered only during the day. Some were challenged because the classes they needed were offered only in the evening. Some were challenged because the class or classes they needed were offered only every few semesters. Most often these challenges were overcome with patient waiting, extending the time to completion.
• Some individuals found issues related to dealing with their children while working most difficult. Childcare was specifically highlighted by several, but other issues included dealing with children’s school responsibilities, handling transportation issues regarding children and trying to attend important events in their lives. Leveraging family resources often provided some support, but some dealt with these issues by stretching themselves thinner and thinner.
• Some completers were not happy with the financial aid office and/or admissions office support they received. There were reports of long lines and staff that were not viewed as helpful or courteous. Unable to overcome issues related to this problem, many report complaining to supervisors or other staff without satisfaction.
• A few completers describe specific classes as their most significant barrier to completion. In many of these instances they describe strong support from an instructor or tutor in helping them overcome this obstacle.
• Some individuals describe location of classes as a barrier to completion. They discussed how some of the programs were offered at only one location that was not convenient or close to them. There were suggestions to offer classes at multiple locations and to limit
field trips or added travel associated with programs. This obstacle was made more daunting by the increased cost of gasoline during the time these individuals worked toward completion.

- Some believe that the programs did not last long enough. They believed that completion and retention of information would have been better with a slightly slower pace. In most cases individuals found that they were able to keep up, but it took a great deal of effort at the sacrifice of other important responsibilities.

- The lack of childcare was mentioned as a difficult barrier for many students. They most often overcame this through leveraging family or by spending money on childcare, making the economic barrier that much more daunting.

- Some students found their time in class difficult financially. In many cases, they were unable to work while in the program and had to rely on budgeting or assistance from friends, families or organized programs in order to sustain and provide.

29) What could your college have done/provided that would have made your path to completion easier?

- Some suggested a better advising process. Better trained individuals and common information shared across campuses. Many suggested that campuses have common practices and better communicate with each other. “Financial aid and advising should be a similar experience across campuses.” Others suggest that improving advising would improve outcomes.

- Many completers believe their path could have been made easier if there had been more course offerings/more options. Many classes were offered only during certain semesters and at only one time (day or night), or at an inconvenient location, making completion more difficult. For serious students, this obstacle slowed momentum and made it more difficult to finish and leverage their education.

- Many programs are offered at only one location. This fact makes completion difficult for those who are not geographically close to those locations.

- Adult learners were frustrated by the fact that they could not easily get credit for work experience. Many were frustrated by the Physical Education requirements. They felt that it was a waste of their precious time.

- Some suggest that a computer class for incoming adults would benefit those students and improve completion rates.

- Some believe that offering low cost or free daycare onsite for students would make completion easier.
• Some felt slowed by the number of course requirements that were not relevant to the specialty area or field associated with their program. Eliminating these courses would make completion easier and add space for more field-specific content.

30) I was satisfied with the content included in my program/course:
• More than 93% of completers were satisfied with the content included in the program or course.

31) What could have been included in the program that would have improved your satisfaction with its content?
• More hands-on content – internships, practicums
• More connections to the industry – networking opportunities – job fairs
• More links to employment
• Better clinical opportunities
• Longer course
• Shorter course
• Some suggested an expansion of topic areas specific to their curriculum

32) The balance of lecture vs. “hands-on” practice could be characterized as follows:
• 39% of respondents felt that there was too much lecture vs. “hands-on” practice (32% a little too much and 7% much too much).
• Only 1.2% felt that there was a little too much “hands-on” and there were not any respondents that felt there was much too much “hands-on” practice.
• This finding indicates that almost all courses/programs will be safe to add no more lecture to the balance of content.

33) Instructors in my program had an appropriate amount of industry experience.
• 90% of respondents were satisfied with the amount of industry experience that their instructors brought to the classroom.

34) I am interested in furthering my education within my area of study of my completed program:
• 86% of completers surveyed are interested in pursuing advanced education within the area of study of the program they completed.

35) I would strongly recommend the program I completed to an interested friend.
• 86% would consider recommending the program they completed to an interested friend.

36) Why would you not recommend your program to a friend?

• Some were unable to find a job after completing.
• Some had difficulty working with the limited scheduling options.
• Some feel that the program was too difficult for their friends.

37) If you had to do it all over again, would you make the same program choice?

• 9% of respondents would not make the same program choice if offered the opportunity.
• 91% would make the same choice or are uncertain.

38) Why are you not certain that you would make the same program choice?

• Some have been disappointed in the employment opportunities associated with their field.
• Some would look for a program with greater salary opportunities.
• Some have since become more interested in another field.

39) Please feel free to share any comments or ideas that you think would improve the quality of the program you completed.

• Many believe their programs could be improved by raising the quality of advising.
• Many want more day classes.
• Many want more evening classes.
• Some would like better instructors.
• Some want more weekend classes.
• Some want more summer courses.
• Some want more challenges.
• Some want more support in gaining employment following the program.
• Some want less general education requirements.
• Some want more “hands-on” practice opportunities.
• Some would like to see their program updated to industry standards, including equipment.
• Some want more structure in the program.
• Some would like a longer, more in-depth program.
• Some would like to see a better selection process for admitting students.
• Some want more online classes.
• Some want less online classes.
APPENDIX B: FOCUS GROUPS

How did the prep program/prerequisites help you to be successful? How did it improve your preparedness?

Most of the students felt that preparation programs and prerequisites laid an important foundation for the learning that occurred in the program. For some, exposure to new information in the prerequisite or preparation improved their comfort level and proficiency when faced with challenges in their programs.

“I was exposed to elements that I had no experience with. It would have been very difficult for me to take on all that I had to take on while learning something entirely new. The way it worked out, it was not a big problem.”

“More difficulties in the prep program made for an easier time in the real program. I didn’t like the idea of taking something extra, but I am glad that I did.”

“I think that it prepared me for the types of things that I would be exposed to. It has been a while since I was in school and it gave me a chance to learn and practice with less pressure while preparing me for what was coming next.”

“For my program, I had to take Anatomy. It worked well for me because I really needed to know it for what I was about to learn. I got a lot of confidence from going through that preparation.”

What was the biggest contributing factor to your successful completion?

Most completers cite their own determination and drive as the most important factor working towards their success. They were totally committed to succeeding. Many seemed to believe that the support that they received from close friends and family members were crucial to the positive outcomes they achieved.

“I worked hard because of my personal determination to obtain certificates. I knew that completing would change my life and I decided to do whatever it took to get through. I did not sleep much at times, but it was worth it.”

“I got great family support. Before I started, I talked with my husband and kids and told them what it was going to take. My husband and I talked it all out beforehand. He got it. Sometimes I had to
fight for the time I needed to do the work, but they understood. None of us knew it would be this hard, but we did what we had to do.”

“It was my second time through. I had gone straight from high school and not finished. This time, I was determined. It was my money and it was my last chance.”

**Tell me how the college supported you in your completion?**

Faculty, staff and advisors provided support that helped many of the completers to reach their goals. Often these individuals went the extra mile to provide more support than was contractually obligated. The students built strong relationships with these individuals and leveraged them to get through tough and trying times.

“I had instructors that were committed to me getting through. They were driven to do what it took to help me be successful. They gave freely of time before and after class. I was motivated by the sacrifice of instructors.”

“My advisor helped me to get through. She worked to get me credit for work that I had done. She helped me to make the right choices and presented me with options to reach my goals. She seemed to care very much about my completion.”

“The instructors kept us on track. They gave good advice, telling us to stay on top of things and giving tips about managing time and getting things done.”

“I discovered that I had a learning disability and applied for assistance through the Access Office. They made it possible for me to get extended time on exams and out of class testing. They gave me individual attention and advocated for me with instructors when necessary. I don’t think I would have made it through without their help.”

Others cited the importance of the financial support received that allowed them to commit fully to the program without having to split time between school and full-time work. Some reported the impact that scholarships and awards had on their ability to obtain books and other resources that were critical to their success.

“I watched people struggle to ‘do it all.’ They worked and raised kids and went to school and just couldn’t keep it all going. Some of them had to drop out. I am grateful that I was able to focus on school and work part-time because of the support that I received.”

“Getting money for books and to take the certifications was important to me. I could not have done that on my own.”
What were the biggest barriers to your success? What was the most daunting challenge that you had to overcome to be successful? How did you overcome?

Every student that participated in the focus group sessions discussed barriers to their completion. Common obstacles had to do with managing time due to the number of responsibilities that had to be navigated simultaneously.

“I had to go to night school at Meramec and I lived right near Florissant Valley. I was working 50 hours a week and driving out to school every evening. I took a time management seminar at work that helped me organize things in a way that allowed me to get things done.”

“I knew of a few women that had to drop out because of childcare issues. It was difficult to juggle home, work and school, but I was able to get the support I needed from family and friends.”

Another common obstacle was the fear of going back to a classroom setting. For many individuals, it had been a long time since they had been in a classroom. It was a challenge, for many, to adjust to the expectations and pace.

“I had been out of school for many, many years and was really shocked by the pace of it all. I didn’t have to deal with a lot of competing responsibilities, so it was easier for me than it was for others. I didn’t sleep or eat for a while, but adjusted pretty quickly.”

“Returning as an older person, I was surprised at all of the people who were not following the rules. It was hard to find a place to work and was difficult to find a computer to use on campus that wasn’t being used for entertainment by another student.”

Others talked about the barriers they encountered limited their access to classes, resources and tools they needed.

“I needed a computer outside of the classroom and did not have one. Lab access was limited so I had to start doing more of my work. There were always younger students on computers downloading music or looking up entertainment stories. I could not get on to do my work.”

“Daytime only classes made it very difficult when you had to work. More evening and weekend classes would have made things much easier. I was able to adjust, but many were not.”
How has completion/attendance made you a better worker/candidate for work? (Tech skills, soft skills or team skills) How have you gained an advantage as a result of your completion?

Completers report an improvement in technical skills and an overall boost in confidence that they believe makes them better applicants and employees.

“I spent a semester working in a lab at a real company. I learned how a lab was organized and run while gaining lots of industry specific knowledge. When I started a real job, I was able to jump right it.”

“I did something that ½ of the people that try it fail in. I have a lot of knowledge and solid experience in my field and I have set myself apart.”

Students report success on the job as a result of completion and have received positive performance feedback from employers and customers.

“When you go to a temporary agency they have you do a test to assess your skills. They were blown away by my scores. I can do anything that they need. It makes me more marketable.”

“On my first solo solar job, I had no problems at all. It was easy for me because I had been taught all of the important technical skills for the job. I just applied my learning.”

Students report a gain in some important soft skills as a result of completion.

“I really benefitted from being forced to work with others on a number of projects. I prefer to work alone and didn’t like it when they made me do it. I am better at my current job because of it. I manage and deal with people of all types of personalities better because of my group work in the program.”

“I communicated across generations in my program. I have confidence to deal with all kinds of people, even those who do not have strong soft skill. I learned how to work through a group dynamic with all kinds of people.”

“I learned how to communicate in a laboratory environment during my time working in an actual lab. There was a certain way of interacting and talking to each other that I would have otherwise not been aware of. It helped me make a good impression when I gained employment.”
Tell me about any feedback you have received from an employer or others:

When already employed, many felt a new level of respect from leaders and co-workers.

“My bosses loved it. They liked all of my updated skills and started to rely on me for more jobs. They impressed by the commitment I showed and wanted to leverage my new skills.”

“My peers noticed improvement in presentation skills. In the program I had to present regularly and I gained a higher comfort and skill level that came back to work with me.”

Some found that others saw them as a resource after completing.

“I became the resource for lots of stuff. My technical skills were leveraged by everyone around me and they were constantly asking me to show them how to do some pretty cool stuff.”

“I started to get asked to participate on more projects because others were looking to leverage my skills. It was cool that people were relying on me to be the expert.”

How could the college support students better? What could be added or done differently that would have a positive impact?

Completers believe that having more classes offered at different times and locations would improve outcomes.

“I had to drive all the way out to Forest Park at night when I lived 5 minutes from Florissant Valley. It made it really hard to get that class in.”

“PV classes were very limited. It would have made things easier for me and I would have completed sooner.”

Some think the college is still geared to daytime students who don’t work.

“It is still set up for daytime students that aren’t working. Labs shut down too early and support groups that I could have benefitted from meet during the day on weekdays. There needs to be more options for working adults to benefit from resources.”

“Adults who are working do not need to have a P.E. requirement. I don’t understand it and it needs to be evaluated.”
“It needs to be easier to get credit for working in the field. I got credit for some work, but it took a long time and I had to go to several people to get it done.”

“We need special counseling or support groups for working students. I saw a lot of good students drop.”

Students want a stronger link to work – better networking opportunities and after-program job support.

“We heard about industry partners, but we never saw them. They told us to dress nice in case someone came in, but nobody ever did.”

“It would help if they would tell us how to market our skills better – tell us the latest phrasing – I knew how to do some of the things employers wanted, but I didn’t call it the same thing that they did, so they missed it.”

“We need to develop more of a network. The school should provide access to community business partners. Many of us have no connections and we would benefit from anything at all.”

“We were told we were going to have our own job fair, but it never happened. Some of us skipped a job fair because we were told we were going to have our own.”

Some felt accelerated programs could benefit from expanding a few days so that more effective learning could occur.

“Students get overwhelmed – missing just one day and you feel like you are doomed. Even if you go to every BTT class, you can’t take all of that in. Another day or two would make it much better.”

“Why does everything have to happen so fast? Too much cramming. Slower, with more ‘hands-on’ would improve outcomes.”

Some feel that on-site childcare would be a benefit to students.

“I used it when they had it. It just made things so easy and then it just went away. A lot of people could not overcome childcare issues and just dropped out or failed.”

“I am a single dad and would have loved to have had childcare. It was a struggle getting the kids somewhere 3 times a week.”

Offering more free seminars on topics important to student success and making current offerings more visible was suggested and supported.
“Self-help seminars are sometimes offered. I sat in one and it was great. There should be more of these things visible to students. Many don’t even know when stuff that could help them is happening.”

“Lots of people aren’t even aware of tutors that are offered or labs that they could use. If I had known about all of the resources available to students, I would have taken advantage. It is hard for people who are just here for a class or two.”

Getting all campuses on the same page and improving resources in supporting students with advising, financial aid and admissions would be a great benefit.

“Advisors could be more proactive about graduation requirements. Everything came at the last minute and I got different information regarding my requirements depending on which campus I was on.”

“Advisors should all be on the same page. It is like they are all working at different places with totally different requirements and they have no idea what is going on in the other areas.”

Some feel that a mentoring program specific to field of study would be a great benefit to incoming students.

“We need a mentoring program that would help people get through. It would also be a good way to begin networking in the community and field.”

“I think we should invite students back to do some mentoring. It would be great to have them to talk to and use as a resource. They could also help keep the content and equipment current.”

Some were concerned about differentiating their credentials from “pay” schools with similar offerings.

“We don’t want to be lumped in with Sanford Brown or some of the other pay schools. How can the college make sure that we aren’t lumped in with them?”
APPENDIX C: EMPLOYER CASE STUDIES

CONVERSATIONS WITH EMPLOYERS – AVAILABLE JOBS & REQUIRED SKILLS

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Introduction

The St. Louis region employs approximately 1.4 million people. Total employment is up 1.2% (a net increase of 9,400 jobs) from last year at this time. The Region’s unemployment rate now stands at 7.0%, and has been steadily improving since 2010 (2010 unemployment = 9.8%, 2012 unemployment rate = 7.7%). Industry sectors which experienced job growth in the past year include: Wholesale and Retail Trade; Transportation and Utilities; Leisure and Hospitality; Educational and Health Services; and Financial Services. Employment projections for the Region suggest continued employment growth of 1.5 percent each year through 2017. Industries which are expected to add a significant number of jobs (more than 5,000) between now and 2017 include: Wholesale and Retail Trade; Health Service; Professional Business Services; All Government; and Leisure and Hospitality (Source: Bureau of Labor Statistics, Current Employment Statistics)

St. Louis’ economic recovery is continuing, but at a slow pace. Employers appear optimistic and report plans for employment expansion. The current gap in the St. Louis region between available workers and employment demand is fairly narrow, however a simple supply and demand analysis does not address emerging or new occupations, nor does it address the overall quality of new or existing employees. Additional analysis is required to examine if the region has the right type of workers, with appropriate skill sets to meet both existing and new workforce demands. The need to increase skill and educational levels is well documented. The Lumina Foundation has identified the need for an increase in the number of adults with education beyond high school and improved skills in mathematics, science, and digital literacy (A Stronger Nation Through Higher Education, 2012). A review of St. Louis unemployment by educational level further illustrates this point (See Figure 1: Source American Community Survey)
To further explore employers’ needs and skill demands, we conducted a set of “Executive Interviews” with six area employers. Employers included in this analysis covered a variety of industries (Financial Services, Manufacturing, Transportation, Businesses/Logistics; and Scientific Development) and ranged in size from less than 100 to 30,000 employees. In addition, employers selected for this data collection also covered a wide spectrum of organizational scope and culture from start-up, entrepreneurial operations with flat, streamlined cultures to well established companies with significant organizational hierarchal structures.

The interviews were designed to engage employers in discussions of what they see as possible challenges when searching for new employees and what they believe are the most important skills, abilities, personality traits required for their current and future employees. We were particularly interested in examining how they evaluate educational degrees, credentials, and work experience when searching for employees. In short, we sought to have the employer describe their “Ideal Employee” and what, if any role they expect colleges to play in developing such an employee.

Results for each employer, as well as an overall summary are presented. Throughout the interviews, employers provided specific comments regarding a variety of topics. In attempt to organize and clarify such comments, yet remain fair to the interviewee, we have presented such specific comments in bold italics, but avoided stating such comments as direct quotes.
Employer Case Studies

St. Louis Airport Authority

The St. Louis Airport Authority (SLAA) employs approximately 540 individuals. The Airport Authority is responsible for airfield operations and maintenance, as well as the overall operations, maintenance and management of Lambert Airport. Aside from the management team, employees include: police, fire-fighters, electricians, automotive maintenance, industrial maintenance, engineers, airfield support/maintenance, and operations center technical center staff. Overall employment levels are expected to remain constant over the next 12-18 months, although issues related to an aging workforce are being closely monitored. The Airport Authority is currently developing a workforce succession plan with an eye toward its aging workforce and the future need to secure replacement employees.

Although the search for qualified employees will vary by employee type, two central and related themes seemed to emerge as challenges/concerns. First, because SLAA is a “quasi-political” entity with a specific organizational relationship to the City of St. Louis, all SLAA recruitment and hiring practices must abide by St. Louis City procedures and regulations. For example, in order to work for SLAA an employee must have permanent residence within the City of St. Louis. Second, SLAA employees often require a specific “airport” experience. When combined, these two themes often create challenges when attempting to secure qualified candidates with specific airport experience.

Depending on the position, educational level and experience play different roles; however experience in an “airport environment” carries significant value. Educational attainment is valued for all positions, but again will vary by type and position level. Further exploration of this issue revealed that for positions which require education beyond high school, a degree is valued more than short-term credentials, although specific certifications/credentials do carry weight in areas associated with automotive/mechanical positions. When specifically asked if the National Career Readiness Certificate (NCRC) is valued and/or considered during the application and hiring process, the company was unfamiliar with the NCRC.

In addition to technical skills and airport experience, SLAA considers a number of key areas. Such areas include: security and FBI background check; established record of positive work ethic, teamwork; carefulness and adherence to safety regulations; ability to follow work rules; punctuality; and willingness to accept shift work.

As SLAA looks to the future, it appears they will soon face a challenging task of finding new employees with the required experience who can meet the City of St. Louis residency requirement. This finding is best captured by the following summary statement. We need to bring in younger
people and develop training and promotional pathways that will allow them to stay and contribute to SLAA for a long period of time. Working in the airport environment requires a specific skill and experience set with a dedication to safety.

**TAGG Logistics**

TAGG Logistics is an order fulfillment and third-party logistics (3LP) provider focused on helping businesses cost-effectively handle their order fulfillment and distribution challenges. TAGG has operations in St. Louis, Missouri and Reno Nevada, with a combined workforce of approximately 60 employees. TAGG continues to expand and has experienced both client and employee growth for each of the last seven years.

The workforce consists of key operations support staff including, Information Systems, Accounting, Human Resources, Client Services and Operations Management. The majority of challenge. There is a difference in the applicant pool between St. Louis and Reno with Reno applicants possessing more experience in the warehouse industry, a stronger work ethic, and better an understanding of the industry.

The pool of applicants for the St. Louis warehouse seems lacking in terms of work ethic, as evidenced by the following statement. *Attitude, willingness to learn and follow directions, and work ethic are the most important traits for this type of position. If they have those, we can train them in the other skills, but you can’t train someone in work ethic.* Recruitment efforts include personal referrals, Monster, and Craig’s List, but the overall quality and quantity of applicants is lacking. When considering someone for the entry-level warehouse position, the acquisition of a high school degree or GED is used to help screen applicants, but experience and a solid work history are the most important traits. When specifically asked if the National Career Readiness Certificate (NCRC) is valued and/or considered during the application and hiring process, the company was unfamiliar with the NCRC.

*The best warehouse employee is someone who has experience, wants to work hard, understands “Warehouse 101” and possesses solid basic math skills; if someone has a certificate in that we would be interested. We just have a hard time finding people like that in St. Louis. Reno, they get it and we always have a large number of good applicants in that area. Maybe some type of internship program would help us build a better pool of candidates.*

Moving from the warehouse to client and operations support is a possible employee pathway and given the focus on industry experience would benefit both the employee and the company. However, such a pathway would require additional education/training for warehouse employees.
TAGG Logistics is clearly in a growth mode. A more “work-ready” and experienced warehouse set of employees would help them achieve their full potential in St. Louis.

**AEP River Operations**

AEP River Operations is a barge company which offers transportation services of dry bulk commodities throughout the inland river system. With its central office in St. Louis, AEP also has offices in Pittsburgh, Paducah, Lakin, New Orleans, and Mobile. AEP River Operations employs approximately 100 people in its St. Louis executive offices. Employees cover a range of positions and include the following areas: Human Resources & Payroll, Finance & Budget Development, Business Development, Information Technology, Sales, Logistics, Legal, and overall Administrative Support.

The majority of the St. Louis positions require a college degree and experience within the transportation industry. Overall employment outlook is stable as economic and climate conditions are expected to improve in the short-term. In addition, AEP is considering new processes/technologies associated with the possible movement of commodities other than dry bulk.

In general, turnover within the St. Louis office is not a problem, however, AEP does face challenges in finding and keeping qualified IT staff that possess the industry experience and “people skills” necessary to work effectively with other operational units (Sales, Logistics, Business Development, Payroll, etc.).

When considering applicants for deckhands and related vessel operations, experience is the most important trait. *Living and working on the vessel for extending periods of time is part of the job. People need to understand that they will be away from home for extended periods of time (30-45 days). This requires a unique set of attitudes and skills and the job is not for everyone.* AEP is aware of the challenges of vessel work and is working to improve support services and organizational culture for these employees. Promotional opportunities and career pathways are available for vessel employees and within a five-year period a successful deckhand can move forward on the pathway and become a “wheel-house” employee. Given the value that AEP places on experience, they are constantly working to support and develop such pathways. AEP has initiated an educational partnership with Western Kentucky University to help develop career development training programs.

When asked to consider challenges and possible skill gaps within new hires, AEP addressed several issues. Diversity is important for AEP and the recruitment of women to vessel operations remains a challenges. Maintaining licensure and regulatory requirements for vessel operations and employees also presents a unique set of challenges. This seems especially relevant regarding U.S. Coast Guard
fitness regulations related to vessel Captains/Pilots. The Captain/Pilot job does not provide for much exercise and physical activity. Therefore, if they are not attentive to their fitness levels they may not be able to pass the Coast Guard’s fitness examination. This examination is required for Captain/Pilot recertification every five years.

With regard to possible skill gaps of new employees it was mentioned that new employees often feel entitled to promotion without having the experience to have earned a promotion. New employees need to understand that we hire and develop bright people in all areas. Before someone can be considered for advancement/promotion they need to earn the respect of peers/colleagues/supervisors and prove themselves.

When asked to describe an ideal employee AEP gave the following description. We need people who are open-minded, open to change, and realize they don’t know everything. They are interested in learning and in sharing what they know with others. They are a team player, but dedicated to individual excellence in what they do and how they live their life. Life on the vessel is exciting and constantly changing so we need people who can adapt. The ability to adapt is also critical in the corporate office because plans can change as a result of climate and market conditions.

In considering the value of education and experience, AEP sees both as valuable but depending on the position, one may take precedent. With regard to education, AEP values the college degree over short-term credentials, and when asked if the National Career Readiness Certificate (NCRC) is valued and/or considered during the application and hiring process, the company was unfamiliar with the NCRC.

**Precision Prototyping & Manufacturing (PPM)**

Precision Prototyping & Manufacturing (PPM) provides manufacturing services related to waterjet cutting, Press Brake, Aircraft Sheet Metal and assembly. Secondary operations include de-burring, light machining and surface finish processes. PPM primarily focuses on the aerospace industry, but is currently working to diversify its customer base. PPM employs approximately 30 individuals, including six front office, administrative support personnel. Conditions and potential for continued growth are available; however ownership/management is currently satisfied with overall scope of operations. Increased government regulations, especially in regard to environmental issues were mentioned as key challenges when PPM considers expansion and/or product diversification.

PPM employs various levels of technical employees ranging from entry level installers to fabricators to quality assurance specialists. The entry-level, installer position can be difficult to fill. There is no specific skill training for this position, however a good candidate will be “work-ready”. When asked
to elaborate on the concept of work-ready, PPM offered the following explanation. *We need someone who has a good work ethic and a solid history of going to work, showing up on time and completing their work in a timely manner. We want someone who recognizes the value of a job (that includes health insurance) and takes the job seriously.* PPM uses Craig’s List to recruit for entry-level positions and usually doesn’t have problems securing applicants; however for every 30 applicants they might find one individual who fits their work-ready description.

Ideally, PPM would prefer to see employees move through their various employee levels from entry-level installer to fabricator and eventually to quality assurance. When searching for the more advanced fabricator and quality assurance positions, PPM is looking for experience, with an emphasis in aerospace and mechanical aptitude. Certifications are important for these advanced positions, and PPM specifically noted ISO and AS9100 as key certifications. PPM also discussed the value of its partnership with St. Louis Community College and mentioned the College’s Aerospace Institute/training program as especially valuable.

When asked to expound on this partnership PPM provided the following details.

**St. Louis Community College has been a great partner for us. We are involved with their aerospace and manufacturing technology program advisory board. Those types of advisory board meetings are a good idea, but if we have a sense that a college isn’t paying attention to our needs and what we have to offer, we stop attending. That just isn’t the case with St. Louis. We believe they value our input and can see that they are using our ideas and comments to improve their program. The College’s instructors and program are very thorough and we know that someone who comes from their program has the skills we need.** As a part of this conversation, PPM also mentioned a positive partnership with St. Charles Community College’s CADD program.

Although PPM did mention specific certifications and found their partnerships with local community colleges valuable, they did stress that education/certification alone is not enough. We don’t have a lot of employees, so when we hire someone we need to know that they have the necessary experience and a solid work history. We need people who are self-confident, respect themselves and respect the fact that they are being paid to do a good job. When asked if the National Career Readiness Certificate (NCRC) is valued and/or considered during the application and hiring process, the company was unfamiliar with the NCRC.

**NewLeaf Symbiotics**

NewLeaf Symbiotics is a science-based company conducting cutting-edge research and product development using naturally occurring beneficial plant bacteria. NewLeaf Symbiotics started in St.
Louis in 2012 and is engaged in laboratory, greenhouse, and field product trials with an eye toward commercialization and license products in 2014.

Proximity to Monsanto, the Danforth Plant Science Center, and Washington University were key factors in NewLeaf’s decision to locate in St. Louis. Such factors combined with a reasonable cost of living and a solid cadre of plant scientists made St. Louis an excellent choice. NewLeaf currently has a small workforce in St. Louis, however, they anticipate growth and expansion over the next several years. Employee growth is expected in selected scientific fields associated with plant pathology, micro-biology and specialized laboratory technicians. Depending on product development and commercialization they may also be a need to acquire additional technical, business development and/or sales staff.

NewLeaf reports that the talent pool for experienced individuals with advanced degrees, as well as for laboratory technicians is sufficient in the St. Louis area. NewLeaf employs a non-traditional organization structure in which senior leadership is dispersed around the country. Such a structure requires employees who are technically competent, confident, flexible, and knowledgeable in a wide variety of areas. In addition, employees must possess excellent communication skills and be willing to share information and work as a team. NewLeaf’s organizational culture is exciting and developing, and requires a somewhat special individual. The following description captures the essence of what NewLeaf is seeking in an employee. We hire very bright people, yet we require them to check their egos at the door. Of course we value an individual’s skills and abilities, but the goal is not for one person to succeed, it is for all of us to succeed. We need people who are action-oriented, willing to take risks, and have the capacity to continuously learn and develop.

In regard to partnering with educational institutions, NewLeaf specifically mentioned its positive relationship with Washington University and St. Louis Community College. Our partnership with St. Louis Community College to acquire space and talent at BRDG Park has been especially helpful. The partnership with St. Louis Community college has been great and really was a pleasant surprise. Such partnerships for us and other bio-technology companies can help solidify St. Louis as an attractive location for Plant and Biotechnology development. St. Louis has a lot to offer for the bio-technology and plant science industry and we are pleased with our decision to locate in this area.

Although NewLeaf clearly values appropriate degree and experience levels, they are not currently in need of specific certifications outside of degree programs. When asked if the National Career Readiness Certificate (NCRC) is valued and/or considered during the application and hiring process, the company was unfamiliar with the NCRC.
Edward Jones Financial

Edward Jones has more than seven million investors and employs approximately 35,000 people. More than 5,000 of those employees are located in the St. Louis area. Financial Services is a growth industry and Edward Jones is growing. Last year, Edward Jones filled 900 openings and they are on pace to hire another 900 employees during 2013. In a given year, Edward Jones will receive nearly 500,000 resumes and processing that volume is challenging. They are adding both new hires and developing organizational depth by promoting from within and then filling positions as a result of the promotions. Key hiring areas include: Financial Advisors, Administrative Support, Information System/Technology, Accounting, and Call Center Staff.

The Edward Jones business plan drives all human resource decisions. Their business plan is developed around serving individual investors and building long-term client relationships. Given this approach, Edward Jones seeks to hire experienced professionals who will remain with their company for a long period. In an effort to inject younger, but still experienced employees into their company, Edward Jones has an extensive internship program. Internships are designed to cover a one year period and result in a “hire or no-hire” decision at the end of that year. Edward Jones recruits regionally, but is committed to hiring locally in an effort to drive local economic development.

Financial experience is the number one trait Edward Jones seeks. The biggest challenge they face is finding experienced applicants who possess the required licensure/certifications (Series 66, Series 7, CFP and CFA). Experience trumps everything, including the degree/educational background. Applicants are dismissed from the pool if they do not have the appropriate certification (or cannot acquire the appropriate certifications). When searching for new talent, Edward Jones relies heavily on referrals and recruit experienced people.

Finding experienced and skilled IT staff continues to challenge recruiters. Emerging software applications results in an ongoing and specific need for Oracle, JavaScript and Oracle WebLogic developers. Also, finding experienced and skilled IT staff for data security challenges can be problematic. IT Certification does make a difference, especially when matched with financial services experience. Difficulties/challenges in this area are compounded by the apparent struggle to attract good people to St. Louis. It is not the St. Louis is a bad place to work and live, but other urban areas just have more to offer, however, after an employee is with Edward Jones for three years, they want to stay with the company and in the St. Louis office.

Aside from licensure/certification requirements and specific IT needs, Edward Jones does not have a difficult time finding new talent. Licensure/certification issue has presented challenges as Edward Jones strives to match the diversity of its workforce to the diversity of the St. Louis area.
Edward Jones has established partnerships with local colleges and universities and specifically mentioned Maryville University, Southern Illinois-Edwardsville, and University of Missouri-St. Louis as key partners. Edward Jones engages with these partners through advisory committees and internship programs. As part of their partnership with area colleges Edward Jones has shared the following areas as “skill gaps”: problem solving skills; analytical skills; business writing and communication skills in general; independent thinking; and overall business acumen. Edward Jones uses its comprehensive Learning Management System, as well as peer-to-peer and leader mentoring programs to assist new hires in improving skills in these areas.

Edward Jones values college degrees, both for content and because it reveals that a person is a “completer.” *The completion of the degree is important to us because it tends to reveal that a person is well-rounded, more mature, and can complete what they start.* Aside from specialized financial certification, Edward Jones does not value short-term credentials. When asked if the National Career Readiness Certificate (NCRC) is valued and/or considered during the application and hiring process, the company was unfamiliar with the NCRC.

In describing the ideal Edward Jones, the company stated the following: *Relationship building and personal development are very important at Edward Jones. On top that, we want someone with financial services experience, who is well-rounded and has a passion for collaboration and helping others.*
Summary

Although each organization varied in size, scope and industry focus, a number of common elements emerged. All employers expressed optimism regarding economic development in the St. Louis area and are looking to expand their workforce in the next 18 to 24 months. For the most part, employers are not having a difficult time finding quality applicants and employees; however several employers did indicate that entry-level (and often low skilled) employees are not as “work-ready” as employers would like. Employers defined “work-ready” in the following manner: commitment to excellent performance; show-up on time and work hard; follow directions; if you don’t know what to do, ask someone; and respect yourself and your co-workers.

Although this data collection did not specifically focus on the need for “soft-skills”, employers repeatedly discussed the value of such skills. This finding is consistent with research/interviews conducted for last year’s State of the Workforce project. The following skills were listed as critically important by all employers: Communication and Interpersonal Skills, Teamwork and Collaboration; Adaptability and the Willingness/Ability to Learn New Things; Critical Thinking/Problem Solving; and Professional and Mature Work Ethic. Moreover, employers stated that younger workers have a sense of entitlement; that promotions are expected before the employee has invested sufficient time to gain the appropriate level of experience needed for promotion. The importance of such skills is further supported by David Conley. In his recent publication, *The State of College Access and Completion*, Dr. Conley concludes that “the priority on soft skills (what Conley calls metacognitive skills) is clear. Interestingly, work ethic is the clear winner. The next four priorities describe the setting–teamwork, decision making, critical thinking, and computer literacy.”

In previous research (St. Louis State of the Workforce: Conversations with Employers Regarding Potential Challenges in Securing Quality Employees and The Role and Importance of Soft Skills in Workforce Development---Cosgrove & Associates, 2012) we suggested that the importance of integrating soft skills with the necessary technical and/or job specific requirements, seems to reveal an organizational hierarchy of needs that is somewhat similar to Maslow individual Hierarchy of Needs (*Maslow, A. Theory of Human Motivation, 1943*).

Given current supply of workers, employers expect interview finalists to fill their needs for “competent employees”. This set of basic competencies is consistent with the primary physiological and security needs as outlined in Maslow’s levels 1 and 2. What separates a “good applicant” or even a “good employee” from an “excellent employee” who can grow as worker, are the higher order soft skills (communication, social intelligence, team player, critical-thinker, problem solver, etc…). These higher order skills match Maslow levels 3-5 (Social Needs, Esteem Needs, and Self-Actualization
Needs). An employee that is technically competent and has strong soft-skills is much more likely to reach their full potential and contribute more to their organization.

This theory is once again supported by findings from the current set of employer interviews. When asked to describe their ideal employee, each employer focused on the value and importance of the following key areas: passion for the job/career; someone who is looking to learn and develop as a long-term employee; mature work ethic with a willingness to do what it takes to get the job done; a team player with strong interpersonal skills; and someone who wants their work/efforts to make a difference.

Another key finding from the current set of interviews is that work experience matters and it really matters for low-skilled, entry level positions. This may seem paradoxical, but all employers told us they are seeking individuals with a solid work history. Where appropriate for more advanced positions, the college degree certainly is valued, but a combination of experience and educational credentials is always preferred. When we explored a somewhat wider definition of “educational credential”, the majority of the employers did not seem to value short-term certificates, unless the certificate was related to specific industry documented or recognized need (automotive, IT/IS, manufacturing or laboratory technicians/processes). General, short-term certificates without appropriate industry or occupational validation did not seem to merit employers’ attention. Employers were unaware of ACT’s National Career Readiness Certificate (NCRC). This finding is consistent with the Carnevale’s research (Certificates: Gateway to Gainful Employment and College Degrees, Carnevale, A., et al., Georgetown University, 2012).

Although employers are encouraged by improving economic trends, more job creation is needed across a variety of industry, skill and demographic sectors to return St. Louis to a truly healthy economy. We suggest further exploration of the following ideas.

- Low skilled and unemployed individuals must have access to short-term, industry validate certificates which lead to meaningful employment and career pathways. Such certificates should include specific attention to the value of being “work-ready” and “soft-skills” development.
- Education institutions and policy boards should document and market the value of short-term certificates to employers.
- Educational institutions should work more closely with industry/employer partners to develop more intern and “learn and earn” opportunities. Such opportunities will help meet employer needs for entry-level, experienced workers.
- St. Louis’ potential as a source for scientists and skill technicians in the bio-technology and plant science industry is nationally recognized. To reach its full potential, the region
should continue to push for improvements in the quality of undergraduate education in science, technology, engineering and mathematics (STEM education).

Meeting the skill needs of employers will require continuous and productive partnerships among educators, policy-makers, and businesses/labor. The basis for such partnerships should include a fully integrate approach which addresses improving STEM skills, while at the same time focusing on what Gary Beach calls the “5Cs”--- critical thinking, communication, collaboration, creativity and confidence” (Beach, G., The U.S. Technology Skills Gap: What Every Technology Executive Must Know To Save America’s Future, 2013). As evidenced by the following statements, Mr. Beach is not alone in this observation.

• “When I talk to high school and college students I find the connection of skills learned in math and science to skills used in work, and in life, is missing. Educators need to make this connection –how does a lab in science relate to work and life? How does calculus relate? These lack of connections are a serious gap in our education system.”—Nancy Newkirk, Chief Information Officer, International Data Group.

• “The American educational system has lost touch with the reality of providing people with the practical skills and competencies required for young professionals to add meaningful value to our corporations. America needs to rethink how we prepare young people to have meaningful careers that are both financially and intellectually rewarding.”—Larry Bonfante, Chief Information Officer, The United States Tennis Association.

• “One of the most difficult roles I have as a chief information officer is finding and recruiting talent. In a growing business, with average turnover rates, I run at a constant talent deficit because I cannot find people with the skills I need to the job openings I have. If the American education system cannot produce a work force with the appropriate skills then these jobs will be filled by global providers. The need to focus on creating career-ready individuals is not an educational imperative. It is an economic imperative.”—Gary King, Executive Vice President, Chief Information Officer, Chico’s,Inc.

• “Survival of the fittest’ has shaped the evolution of our species for hundreds, thousands, even millions of years. In the 21st century business context, the fittest are those with the ability to think critically, solve problems, innovate and collaborate effectively with one another. If we fail to equip our children with these skills through significant enhancements to our education systems, how will they ever survive?”—Bill Schlough, Senior Vice President, Chief Information Officer, San Francisco Giants.
APPENDIX D: ST. LOUIS WORKFORCE SURVEY 2013

Initial Question Employees

First, how many employees does your company currently employ in the St. Louis area?

Clarify if needed: If they are owner, for example, and are self-employed, we do still count them in the total number of employees.

[0] None
[1] Less than 5
[2] 5 but < 25
[3] 25 but < 50
[4] 50 but < 100
[5] 100 or more
[8] Don’t Know/Not Sure
[9] Refused

If ANSWER is ‘0’ or ‘1’ then go to Question TCS_INEL (No Interview if less than 5 employees)

Question Q1

Over the next 12 months, does your business plan on changing your current employment levels? Will the level

[5] Increase significantly
[4] Increase slightly
[3] Remain the same
[2] Decrease slightly or
[1] Decrease significantly?
[8] Don’t Know/Not Sure
[9] Refused

**Question Q2**

Over the past 12 months, would you say your employment levels have

[5] Increased significantly
[4] Increased slightly
[3] Remained the same as before
[2] Decreased slightly or
[1] Decreased significantly?

[8] Don’t Know/Not Sure
[9] Refused

**Question Q3**

Now I will read you a list of possible barriers. Please tell me if you face any of them in expanding your employment level.

[Read list and check all that apply]

☑️ Shortage of workers with knowledge or skills
☑️ Shortage of available training programs
☑️ Economic conditions
☑️ Government policies or regulations
☑️ Lack of information
☑️ Lack of access to transportation to get to work
☑️ Lack of access to child care
☑️ Are there any other barriers you face in expanding employment? (Specify)
☑️ NONE (no barriers)
Question Q4

If you were to add employees in the next 12 months, which of the following methods would you be likely to use?

[Read list and check all that apply]

☑ Recalling workers from a lay-off list
☑ Hiring new full-time employees
☑ Hiring part-time employees
☑ Hiring contract employees
☑ Using a temporary agency, or
☑ Doing something else? (Specify)
☑ NONE of the above
☑ Don’t Know/Not Sure
☑ Refused
☑ Not Applicable - not wanting to expand (Do not read this one)
☑ Continue to next question (Interviewer: do not read this one)

Question Q5

Next I will read you a list of possible shortcomings in job applicants. Please tell me if you have noticed any of them in your recent job applicants.

[Read list and check all that apply]

☑ Poor work ethic
Lack of communication or interpersonal skills
Lack of willingness and ability to learn
Lack of basic math skills
Lack of writing skills
Inability to understand written and graphical information
Lack of teamwork and collaboration
Lack of critical thinking and problem-solving
Inability to think creatively, i.e. “out of the box”
Lack of general knowledge about business or industry
Lack of technical skills specific to the job
Lack of computer skills
ALL OF THE ABOVE
OTHER (Specify)
NONE of the above
Don’t Know/Not Sure
Refused
Not Applicable - (Have not had any recent job applicants)
Continue to next question (Interviewer: do not read this one)

**Question Q6**

Which of the following methods do you use to assist current workers in addressing your company’s need for new or increased skill requirements?

[Read list and check all that apply]

In-house classroom training
On-the-job training
Vendor training

Apprenticeships programs

Community College provided customized training/education

Vocational training

Tuition reimbursement

Hire only workers who are already trained

Online courses

OTHER (Specify)

NONE

Don’t Know/Not Sure

Refused

Not Applicable (Do not need new or increased skills)

Continue to next question (Interviewer: do not read this one)

**Question Q7**

In which of the following areas would you be interested in learning more about education and training options offered by St. Louis Community College?

[Check all that apply - read when necessary]

Focus Group Facilitation

Corporate College space for computer and/or skills training, conferences, board meetings and/or staff retreats

Strategic Talent Development

Technical Training

Lean Transformations/5S, Six Sigma

Instructional Design/e-Learning
☐ Customized degree completion options for employees
☐ Customer Service
☐ Safety Training
☐ Employee Assessment and Selection
☐ Team Building/Group Processes
☐ Strategic Planning
☐ Leadership Development/Succession Planning
☐ Sales Training
☐ NONE
☐ Don’t Know/Not Sure
☐ Refused
☐ Continue to next question (Interviewer: do not read this one)

**Question Q8**

Next, I’d like to ask you a few questions about compensation and benefits. Which of the following benefits and training opportunities are offered by your company to full-time employees?

[Check all that apply - read when necessary]

☐ Paid Vacation and Holidays
☐ Medical Insurance
☐ Pension program (defined benefit)
☐ 401K including SAR/SEP for small business (defined contribution)
☐ Tuition Reimbursement
☐ Are there any other benefits or training options? SPECIFY
☐ NONE
☐ Don’t Know/Not Sure
Refused

Not Applicable (For example: Do not have full-time employees)

Continue to next question (Interviewer: do not read this one)

**Question Q9**

How do you expect the implementation of the Affordable Care Act will influence your employment levels within the following areas?

[Check all that apply - read when necessary]

Full-time employees:

☐ Increase

☐ Decrease

☐ Remain the same

☐ Don’t Know/Not Sure

☐ Refused

Part-time employees:

☐ Increase

☐ Decrease

☐ Remain the same

☐ Don’t Know/Not Sure

☐ Refused

**Question Q10**

How do you expect the implementation of the Affordable Care Act will impact the number of employees that are offered health insurance by your company?

☐ Increased number

☐ Decreased number
Remain the same
Don’t Know/Not Sure
Refused

**Question Q11a**

Now please tell me if you have a skills shortage in each of the following functional areas or occupations? Please answer with "Yes, No, or Not Applicable."

Engineering?

[1] Yes

[2] No

[3] Not applicable

[8] Don’t Know/Not Sure

[9] Refused

If ANSWER is not ‘1’ then go to Question Q11b

**Question Q11aa**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

- Rapidly changing technology and business environment
- Lack of qualified new graduates in the area of need
- Increased competition for qualified graduates
- Prohibitive cost of training existing workforce.
- OTHER (Specify)

**Question Q11b**

Information technology?

[1] Yes
If ANSWER is not ‘1’ then go to Question Q11c

**Question Q11bb**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

☑ Rapidly changing technology and business environment
☑ Lack of qualified new graduates in the area of need
☑ Increased competition for qualified graduates
☑ Prohibitive cost of training existing workforce.
☑ OTHER (Specify)

**Question Q11c**

Patient care?

[1] Yes
[2] No
[3] Not applicable
[8] Don’t Know/Not Sure
[9] Refused

If ANSWER is not ‘1’ then go to Question Q11d

**Question Q11cc**

In your opinion, what is the main reason for this skill shortage?
[Read list and check all that apply]

☑ Rapidly changing technology and business environment
☑ Lack of qualified new graduates in the area of need
☑ Increased competition for qualified graduates
☑ Prohibitive cost of training existing workforce.
☑ OTHER (Specify)

**Question Q11d**

Accounting/Finance?

[1] Yes
[2] No
[3] Not applicable
[8] Don’t Know/Not Sure
[9] Refused

If ANSWER is not ‘1’ then go to Question Q11e

**Question Q11dd**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

☑ Rapidly changing technology and business environment
☑ Lack of qualified new graduates in the area of need
☑ Increased competition for qualified graduates
☑ Prohibitive cost of training existing workforce.
☑ OTHER (Specify)

**Question Q11e**
Business Management?

[1] Yes
[2] No
[3] Not applicable
[8] Don’t Know/Not Sure
[9] Refused

If ANSWER is not ‘1’ then go to Question Q11f

**Question Q11ee**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

☑ Rapidly changing technology and business environment

☑ Lack of qualified new graduates in the area of need

☑ Increased competition for qualified graduates

☑ Prohibitive cost of training existing workforce.

☑ OTHER (Specify)

**Question Q11f**

Skilled trades?

[1] Yes
[2] No
[3] Not applicable
[8] Don’t Know/Not Sure
[9] Refused

If ANSWER is not ‘1’ then go to Question Q11g
**Question Q11ff**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

- ✔ Rapidly changing technology and business environment
- ✔ Lack of qualified new graduates in the area of need
- ✔ Increased competition for qualified graduates
- ✔ Prohibitive cost of training existing workforce.
- ✔ OTHER (Specify)

**Question Q11g**

Customer Service?

[1] Yes
[2] No
[3] Not applicable
[8] Don’t Know/Not Sure
[9] Refused

If ANSWER is not ‘1’ then go to Question Q11h

**Question Q11gg**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

- ✔ Rapidly changing technology and business environment
- ✔ Lack of qualified new graduates in the area of need
- ✔ Increased competition for qualified graduates
- ✔ Prohibitive cost of training existing workforce.
**Question Q11b**

OTHER (Specify)?

- [1] Yes
- [2] No
- [3] Not applicable
- [8] Don’t Know/Not Sure
- [9] Refused

If ANSWER is not ‘1’ then go to Question Q12

**Question Q11bh**

In your opinion, what is the main reason for this skill shortage?

[Read list and check all that apply]

- [ ] Rapidly changing technology and business environment
- [ ] Lack of qualified new graduates in the area of need
- [ ] Increased competition for qualified graduates
- [ ] Prohibitive cost of training existing workforce.
- [ ] OTHER (Specify)

**Question Q12**

Please tell me if you are taking any of the following measures to meet these shortages to avoid the impact on your company’s productivity?

[Read list and check all that apply]

- [ ] Hiring from outside the St. Louis Missouri/Illinois region
- [ ] Hiring from outside the United States
- [ ] Hiring contractors
Forced to hire less experienced workers and then train them
Offering increased wages due to shortage of experience workers
OTHER (Specify)
Don’t Know/Not Sure
Refused
Continue to next question (Interviewer: do not read this one)

**Question Q13a**
In your business, what percentage of positions requires each of the following levels of experience?

Four or more years of experience?
Clarify if necessary:
The following four categories should add up to 100%
The four categories will be:
• 4 or more years
• 1 to 3 years
• Some experience but less than one year
• No experience

**Question Q13b**
One to Three years of experience?
[0] None
[1-100] Percentage of 1 to 3 years of experience positions
[888] Don’t Know/Not Sure
[999] Refused
**Question Q13c**

Some experience but less than one year of experience?

[0] None

[1-100] Percentage of some but less than 1 year of experience positions

[888] Don’t Know/Not Sure

[999] Refused

**Question Q13d**

No experience?

**Question Q14**

When making a hiring decision for an open position, how would you evaluate a new graduate applicant with the latest academic technique/skills training but no experience in the field vs. an applicant with extensive experience in the field (5-10 years) but lacking most recent technique/skills training?

☑ Favor the new graduate

☐ View the candidates equally

☐ Favor the experienced applicant

☐ Don’t Know/Not Sure

[0] None

[1-100] Percentage of No experience positions

[888] Don’t Know/Not Sure

[999] Refused

**Question Q15a**

When making a hiring decision for an open position, how would you evaluate the following credentials: An industry recognized certificate related to the specific requirements of the job vs. the following position related degrees?
**Question Q15b**

Associate degree
- Favor the degree
- View the credentials equally
- Favor the certificate
- Don’t Know/Not Sure

**Question Q15c**

Bachelor’s degree
- Favor the degree
- View the credentials equally
- Favor the certificate
- Don’t Know/Not Sure

**Question Q15d**

An Advanced degree
- Favor the degree
- View the credentials equally
- Favor the certificate
- Don’t Know/Not Sure

**Question Q16a**

In your business, what percentage of positions requires each of the following levels of education?

Doctoral Degree

Clarify if necessary:

The following seven categories should add up to 100%
The seven categories will be:

- Doctoral degree
- Master’s degree
- Bachelor’s degree
- Associate degree
- Post secondary credentials
- High school/GED
- Less than high school

[0] None

[1-100] Percentage of doctoral degree positions

[888] Don’t Know/Not Sure

[999] Refused

**Question Q16b**

Master’s Degree

[0] None

[1-100] Percentage of Master’s Degree positions

[888] Don’t Know/Not Sure

[999] Refuse

**Question Q16c**

Bachelor’s degree

[0] None

[1-100] Percentage of Bachelor’s degree positions

[888] Don’t Know/Not Sure
**Question Q16d**

Associate degree

[0] None

[1-100] Percentage of Associate degree positions

[888] Don’t Know/Not Sure

[999] Refused

**Question Q16e**

Post Secondary Credentials

[0] None

[1-100] Percentage of Post Secondary Credentials positions

[888] Don’t Know/Not Sure

[999] Refused

**Question Q16f**

**High school or GED**

[0] None

[1-100] Percentage of high school/GED positions

[888] Don’t Know/Not Sure

[999] Refused

**Question Q16g**

Less than high school

[0] None

[1-100] Percentage of less than high school positions
Question Q17a

Are job candidates who have obtained their degrees online viewed more favorably, as favorably as, or less favorably than job applicants with traditional degrees (i.e. face to face brick-and-mortar)?

Question Q17b

For entry level positions:
- More favorably
- Less favorably
- As favorably as (the same)
- Don’t Know/Not Sure
- Refused

Question Q17c

For mid-career positions (specialist, analyst):
- More favorably
- Less favorably
- As favorably (the same)
- Don’t Know/Not Sure
- Refused

Question Q17c

For advanced (managerial/executive) positions:
- More favorably
- Less favorably
- As favorably (the same)
**Question Q18**

What percentage of your workforce do you estimate will retire by the following time frames?:

During the next year:

During the next 3 years:

During the next 5 years:

[0] None

[1-100] Percentage of Employees to Retire

[888] Don’t Know/Not Sure

[999] Refuse

[0] None

[1-100] Percentage of Employees to Retire

[888] Don’t Know/Not Sure

[999] Refuse

[0] None

[1-100] Percentage of Employees to Retire

[888] Don’t Know/Not Sure

[999] Refuse

**Question TCS_INEL**

I’m sorry, we will not be able to proceed with the survey. We are only supposed to be interviewing businesses or organizations that have at least 5 employees. Thank you for your time and cooperation. Have a nice day/ evening.

[1] To End Call

[2] If you need to leave a note for the supervisors