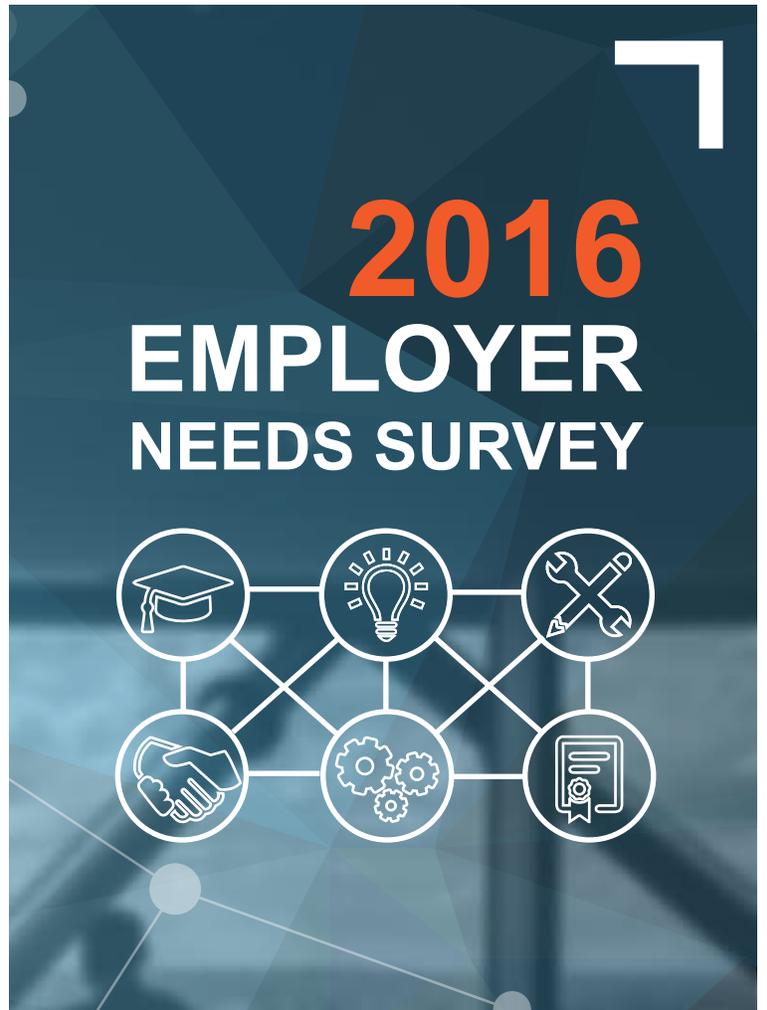




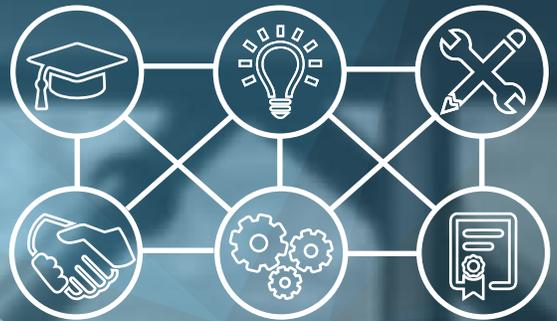
NCWorks
COMMISSION

Labor & Economic Analysis
COMMERCE



2016

EMPLOYER
NEEDS SURVEY





LETTER FROM THE CHAIR

As the board that oversees North Carolina's workforce development system, the NCWorks Commission relies on data to drive strategies that enable the state's workforce and businesses to compete in the global economy. Our mission is to ensure North Carolina has a world-class workforce development system that is adaptable, integrated, relevant, efficient, and effective.

To ensure we have the very best information, we commissioned the Labor and Economic Analysis Division (LEAD) in the NC Department of Commerce to conduct the 2016 Employer Needs Survey. This survey is an update to the report produced by LEAD in 2014. The commission is committed to tracking the needs of employers over time to ensure that our workforce development system is meeting their needs.

We appreciate the findings of the 2016 Employer Needs Survey in helping us understand employer demand for qualified workers. This survey provides quality data for understanding the extent to which North Carolina businesses are experiencing hiring difficulties and identifies the top reasons, recognizing that different challenges exist for different industries. Although hiring remains strong in North Carolina, 39% of employers have had difficulty filling at least one position over the past year, particularly in manufacturing and construction industries. A lack of work experience, education, technical skills, and soft skills were the top reasons given by over half of employers experiencing hiring difficulties.

The conclusions drawn from the report will assist statewide efforts to improve policies and programs that equip job seekers with the skills and experience required by businesses. For example, the evidence suggests there are opportunities to provide more means for younger workers with work experience, such as apprenticeships, internships, and other work-based learning programs. Opportunities also exist for the workforce system to more fully engage with employers in order to help meet their needs and prepare job seekers for current and future jobs.

The commission will continue its efforts to identify and address imbalances that exist between labor supply and demand. Our continued, collaborative progress on NCWorks Career Pathways, NCWorks Certified Work Ready Communities, and NCWorks Career Centers supports the state's goal of having 67% of its workforce with education and training beyond high school in order to meet the needs of the economy.

I want to thank Governor McCrory for placing his confidence in the commission, and the Department of Commerce Labor and Economic Analysis Division (LEAD) for putting together an impactful report that will ensure our workforce system is responsive to the fast-changing needs of employers.

Jerri Tryon, Chair
NCWorks Commission

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Despite an economic and labor market recovery from the previous recession, are employers still having trouble finding qualified job applicants? Do jobseekers possess the qualities employers are seeking? And if not, what is missing? Are there other obstacles to jobseekers and employers making good matches?

The 2016 Employer Needs Survey, carried out by the Labor and Economic Analysis Division (LEAD) of the North Carolina Department of Commerce and the NCWorks Commission, is a survey of over 1,900 establishments of all sizes from across the state. The goal of the survey was to identify the needs of employers across the state, with a particular emphasis on hiring difficulties and recruitment and retention practices. In addition to an Overall sample of all industries, we surveyed four industry-specific samples: Manufacturing, Construction, Health Care & Social Assistance (Health Care), and a set of Science, Technology, Engineering, and Mathematics-related industries (STEM).

When compared to the results of our 2014 survey, we found a similar level of hiring difficulties, with roughly 4 out of 10 hiring employers experiencing difficulty filling at least one position within the previous 12 months. Manufacturing and Construction employers reported higher levels of difficulty while STEM employers reported lower levels of difficulty than the Overall average. The fact that we found the same level of difficulty as in 2014 may be a result of the relatively short time period between the two surveys, or perhaps there is some baseline level of difficulty that is to be expected with such a low measurement threshold. It could also suggest that the reasons for difficulty are more long-term or structural in nature.

KEY FINDINGS

 **4 out of 10 employers** who tried to hire in the past year had **difficulty filling at least one position**

 **Manufacturing and Construction** had **more difficulty** filling positions

 **STEM** industries had **less difficulty**, **Health Care** about the same

 A lack of **work experience, education, technical skills** and **soft skills** were the top reasons given by **over 50%** of employers with hiring difficulties

 **“Experience gap?”**: among Manufacturing, Construction, Health Care, and STEM, **more than half** of positions **requiring 5 years or more** of experience were rated **“very difficult to fill”**

 Top recruiting resources include **“word of mouth”, internet postings, and community colleges**

 **6 out of 10 employers** use **On-the-Job Training exclusively** to meet skill needs

 Opportunities exist for the **workforce development system** and **education partners** to **more fully engage** with employers

While hiring difficulties are often held up as evidence of a “skills gap,” our survey asked employers about a range of possible explanations for difficulties. The top reasons employers selected to explain hiring difficulties (chosen by over half of employers with difficulty) were:

- 1) a lack of work experience
- 2) a lack of education or credentials
- 3) a lack of technical skills
- 4) a lack soft skills

Other reasons, such as a criminal record, low pay, and drug screening issues, were less frequently chosen by employers. One finding among the four industry groups revealed that over half of the positions requiring 5 or more years of experience were rated as “very difficult to fill”—suggesting that one policy solution is to provide more formal opportunities for younger workers to gain work experience such as apprenticeships, internships, and other work-study programs.

The fact that a lack of relevant work experience was the top reason chosen by employers in both the current and previous survey as well as the difficulty in filling jobs requiring 5 years or more of experience suggest that an “experience gap” may be a larger issue than the lack of particular skills. To some extent, this may reflect the demographic structure of the labor force—younger cohorts of workers may lack the years of experience preferred by employers. As older, more experienced workers are retiring, fewer workers are available in the generation between the two groups. Raising educational attainment has also been identified as a state priority as policymakers promote the value of post-secondary credentials. In the long term, both these issues may become less important as a larger, more educated workforce comes onboard.

In the short term, however, employers still need to fill jobs. Although not every position is difficult to fill, employers felt filling these difficult positions was important to their business—over 60 percent ranked filling positions as “extremely important” to their business. Employers used a wide range of resources to recruit—most frequently “word of mouth,” internet postings, and community colleges—while smaller percentages take advantage of the state’s formal workforce development system through the NCWorks Online and NCWorks Career Centers. Roughly 24 percent of employers rely exclusively on “word of mouth” to recruit, meaning that many open positions are never formally advertised. On-the-Job Training is most commonly used by employers to meet workforce training needs—roughly 6 out of 10 use On-the-Job Training exclusively and do not engage outside sources for assistance—perhaps presenting an opportunity for education and workforce development providers in the public and private sectors to engage employers in this challenge.

A key takeaway from the survey is that there is no one issue that employers are facing. Different industries and occupations have different needs, and therefore there is no one single solution to hiring difficulties. Diagnosing specific issues and creating better integration among employers, jobseekers, and the workforce development and education system can potentially help shorter-term needs such as the lack of particular technical or occupational skills to meet changing industry requirements. Other longer-term issues, such as developing a younger cohort of workers to acquire new skills and gain opportunities to advance in a career pathway, will require more time and resources. Opportunities exist for all the stakeholders in North Carolina’s workforce development system to increase their engagement with employers in order to help meet their needs and match jobseekers with jobs.



INTRODUCTION

Nationally and within North Carolina, there is a sense of urgency to address the difficulties some employers have finding qualified workers.ⁱ As the economy continues its recovery from the Great Recession, some evidence suggests there is a mismatch between the jobs available and the skills and interests of the labor force.ⁱⁱ Employers report that the North Carolina labor pool is not matching growing demand for jobs that require strong skills (both “hard skills” and “soft skills”), proper training and certification, sufficient levels of education, and previous work experience.ⁱⁱⁱ

The “skills gap” has been used to explain this paradoxical phenomenon at both the national and state level; one explanation offered is that while there is strong demand for certain types of workers and a large supply of jobseekers in the state, the skills of applicants do not match the needs of employers.^{iv} Other explanations are that wages have not grown enough in some occupations to attract qualified applicants or that negative industry perceptions contribute to a lack of applicants (an “interest gap”).^v While there is no consensus on exactly what is contributing to mismatches, the issue has been identified as an obstacle to lowering unemployment as well as a threat to our competitiveness, and various remedies to the problem have been proposed, including proposals on both the demand and supply side of the matching equation.^{vi} However, examples of mismatches are often based on anecdotal accounts and non-scientific surveys rather than on careful empirical studies. To fully understand this question, a detailed survey of both labor demand (employers) and supply (labor force) would be required. Due to the cost prohibitive nature of this type of study, this report only examines one side of the mismatch—employer demand for qualified workers.

The 2016 Employer Needs Survey is an update to and enhancement of a survey carried out by the Labor and Economic Analysis Division (LEAD) of the North Carolina Department of Commerce and the North Carolina Association of Workforce Development Boards (NCWDB) in 2014 on behalf of North Carolina’s Commission on Workforce Development (subsequently renamed the NCWorks Commission).^{vii} The goal of that survey was to identify the needs of employers across the state, with a particular emphasis on hiring difficulties and recruitment and retention practices. The 2014 survey covered all industries and regions within the state, and focused on companies with 10-499 employees. In addition, the survey included an over-sample of manufacturing employers to study that industry’s unique challenges with hiring difficulties.

The 2016 survey replicates much of the 2014 version, with a few key differences. The survey again includes all industries and regions of the state, but the size restriction on establishments has been removed in order to provide a more representative sample of all establishments in the state.

In addition to this Overall sample, we conducted an Industry-specific survey for four industries: Manufacturing, Construction, Health Care & Social Assistance (Health Care), and a set of Science, Technology, Engineering, and Mathematics-related industries (STEM). We collected additional information on specific current vacancies from respondents in these four industry-specific samples in order to learn more about the nature of the vacancies and hiring demand, including employers' assessments of recent conditions and anticipated future hiring plans. Finally, in contrast to the 2014 online survey, the Center for Urban Affairs and Community Services at North Carolina State University collected all 2016 survey responses through phone interviews.

Taken in conjunction with the results of the 2014 survey, the current findings provide answers to the following questions:

1. What is the current and recent state of hiring by employers in the state?
2. Are employers having difficulties hiring, and if so, which employers and to what extent?
3. What reasons do employers give for hiring difficulties?
4. What can job vacancies tell us about hiring demand and potential difficulties?
5. What are employers' current strategies for recruiting and retaining employees?



The 2016 Employer Needs Survey collected information using similar survey instruments from two distinct samples, an Overall sample and an Industry-specific sample. Both samples were drawn from the Quarterly Census of Employment and Wages (QCEW), an administrative source containing establishments in North Carolina covered under the Unemployment Insurance system. The Overall survey took a random sample across the entire industrial structure from the QCEW, while the Industry-specific survey took random samples of employers from each of the following industries and NAICS codes:

- Manufacturing (310000-339999)
- Construction (230000-239999)
- “STEM” (Software Publishers (5112), Wired Telecommunications Carriers (5171), Wireless Telecommunications Carriers (5172), Satellite Telecommunications (5174), Other Telecommunications (5179), Data Processing and Related Services (5182), Other Information Services (5191), Architectural and Engineering Services (5413), Computer Systems Design and Related Services (5415), Management & Technical Consulting Services (5416), Scientific Research & Development Services (5417), Other Professional & Technical Services (5419))
- Health Care & Social Assistance (620000-629999)

The Center for Urban Affairs and Community Services at NC State University conducted telephone interviews to implement both surveys between September and November 2015. In total, the interviewers collected 1,903 survey responses. The achieved sample includes employers from all 100 counties, and the respondents generally reflect the industrial mix, establishment size and geographic distribution of the state as a whole.^{viii} While comparisons can be made to the 2014 survey in several areas, it is important to note that the earlier survey only included employers with 10-499 employees and can only be compared to establishments of that size range in the current survey.



What percentage of employers are hiring?

In order to understand the hiring needs of employers, it is important to establish how many employers are hiring at all. In the Overall sample, 68 percent of respondents attempted to hire in the past 12 months while 32 percent did not. Among very small establishments (1-9 employees), about 52 percent attempted to hire, while 48 percent did not. Among establishments with 10-499 employees, 89 percent had tried to hire while 11 percent did not—almost exactly the same percentage of businesses attempting to hire in the 2014 study. As one might expect, organizations with more than 10 employees are more likely to have attempted to hire than very small employers who may not desire to or be able to expand their workforce. Among the Industry-specific sample, the percentages trying to hire in the past 12 months varied by industry, with roughly 60 percent of Manufacturing and Health Care employers and 55 percent of Construction and STEM employers reporting attempts to hire over the past year. The trend of very small employers reporting lower attempts was also seen for the Industry-specific employers:

Table 1: Percent of Employers that Tried to Hire in the Past 12 Months:

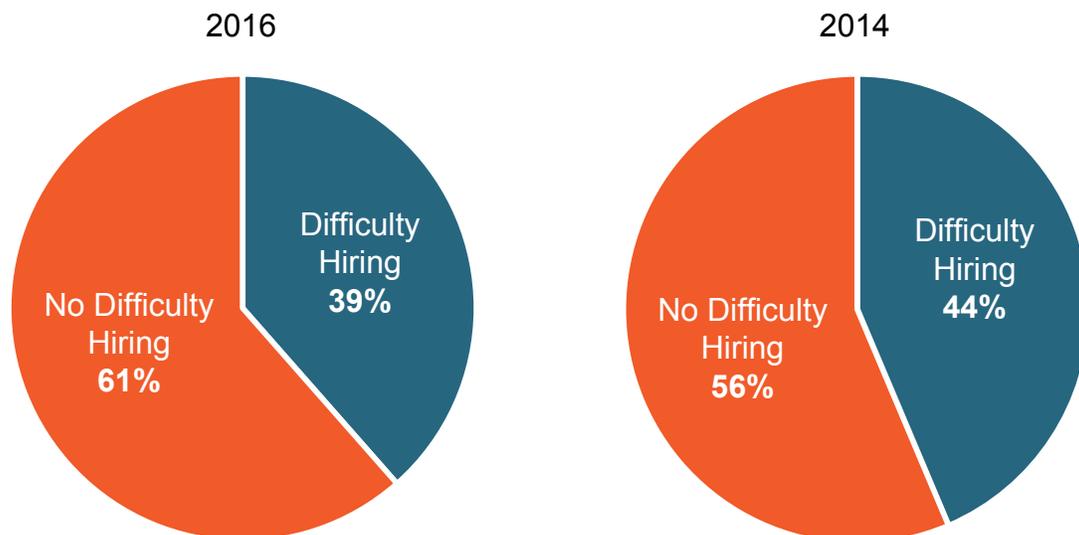
	All Employers	Employers with fewer than 10 employees	Employers with 10-499 employees
Overall Sample	68%	52%	89%
Manufacturing	59%	33%	77%
Construction	55%	40%	73%
STEM	55%	40%	81%
Health Care	60%	42%	77%

What percentage of employers are having difficulties hiring?

Employers who reported “attempting to hire” were asked if they had difficulty filling any of their positions in the past 12 months. This means that even if an employer had difficulty with filling just one out of many vacancies, they would be counted as experiencing hiring difficulties. By setting such a low threshold for difficulty, the survey aimed to capture any level of hiring problems experienced by an employer. In addition, because “difficulty” was not explicitly defined, employers in different industries could define the term for themselves. As a result, this approach should be thought of as capturing the maximum level of hiring difficulties as defined by employers themselves.

Among the Overall sample, 36.5 percent of establishments reported difficulty, while 63.5 percent reported no difficulty. When looking at just establishments between 10-499 employees, 38.5 percent experienced difficulty while 61.5 percent did not (not a statistically significant difference compared to establishments with fewer than 10 employees). This level of difficulty is not significantly different than the results of the 2014 survey, with roughly 4 out of 10 employers reporting difficulties in hiring:

Figure 1: Percent of Establishments Having Difficulty Hiring*

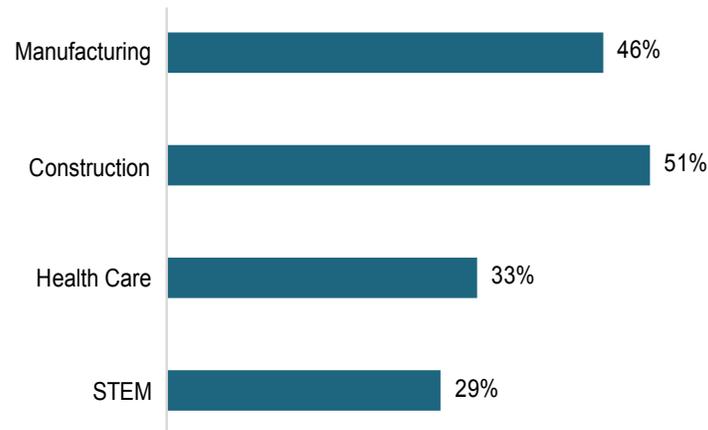


**Among establishments of 10-499 employees*

Although the economy improved and labor market conditions tightened significantly between the two time periods,^{ix} employers reported the same level of difficulty overall. Whether this level of difficulty is “normal” and unrelated to cyclical factors such as the business cycle, or due to more structural issues, is a topic for future research to address.

Within the Industry-specific sample, Manufacturing (45.9%) and Construction (50.8%) had higher percentages of employers reporting difficulty than in the Overall sample (36.5%), while STEM (28.8%) had a lower percentage of difficulty. Health Care (32.6%) was not significantly different from the Overall rate. Within the Industry-specific sample, there were no significant differences by establishment size except for Health Care, where employers of 10 or more employees had more difficulty hiring than very small employers. These difficulties were roughly reflected in the length of time vacancies remained open across the four industries, with Construction and Manufacturing having much longer average vacancies and Health Care and STEM having much shorter vacancies.

Figure 2: Percent of Industry-Specific Establishments Having Difficulty Hiring*



**Among all sizes of employers*

Employers were also asked whether their experience filling positions was more difficult, less difficult, or about the same as the previous year. Nearly 70 percent of the Overall employers said their experience was about the same, while 19 percent rated their experience more difficult and 11 percent said they had less difficulty compared to the previous year. These percentages were similar among the Industry-specific group, with higher percentages of Construction (28%) employers perceiving more difficulty this year, particularly among larger employers (10 and more employees).

Employers were also asked to rank how important it was to their organization to fill both the difficult as well as non-difficult positions. On a scale from 1 to 5, with 5 being “extremely important” and 1 being “not important,” employers reported a mean of 4.4 and 4.5 respectively, demonstrating the high importance of filling both types of positions. This may be expected, as employers would likely not spend time and resources to attract and hire new talent if it was not a top priority. Among those employers reporting hiring difficulty in the past 12 months, 60.6 percent ranked filling these positions as “extremely important.” This set of employers is roughly equal to 22 percent of those who attempted to hire in the past 12 months.

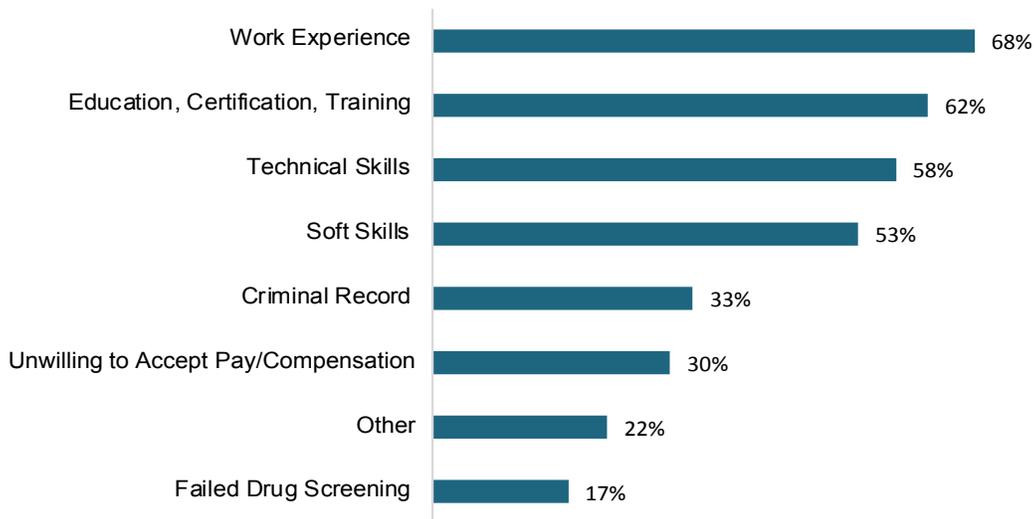
What reasons do employers give for hiring difficulties?

Employers who had reported hiring difficulties were asked about the reasons for difficulties and were allowed to choose multiple responses from the following possibilities:

- Applicants lacked necessary EDUCATION level, certification, or training
- Applicants lacked technical or occupation-based SKILLS
- Applicants lacked SOFT SKILLS such as communication, teamwork, critical thinking
- Applicants lacked relevant WORK EXPERIENCE
- Applicants had CRIMINAL RECORDS
- Applicants failed DRUG SCREENING
- Applicants unwilling to accept offered PAY/COMPENSATION
- Other

There is potential overlap among these reasons, and it is also possible for the same employer to have different reasons for multiple positions. Among the Overall sample, employers chose the following reasons:

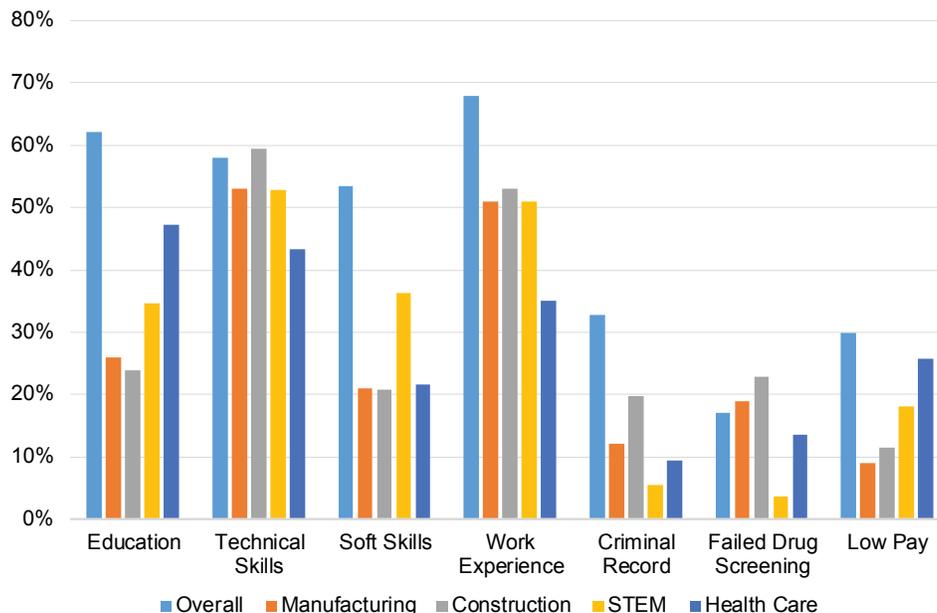
Figure 3: Reasons for Difficulties Chosen by Employers, Overall Sample



The top three most frequently selected reasons in the Overall sample match the 2014 survey: a lack of relevant work experience, education credentials, and technical skills. A lack of soft skills is the fourth most commonly selected reason, with over half of employers experiencing difficulty choosing it. Almost one-third of employers selected an applicant’s criminal record as a reason for difficulty, with smaller percentages choosing unacceptable wages and other reasons. Failing a drug screening, although anecdotally cited as a major obstacle for some employers, was the least most commonly chosen reason for difficulties.

Within the Industry-specific sample, a few differences emerge. Manufacturing and Construction both selected a lack of technical and work experience as the top two reasons for difficulties, followed by a lack of education. STEM employers also chose technical skills and work experience as the top two, with soft skills and education close behind. Health Care employers chose education and technical skills as the top two, with work experience following those. These findings indicate that the relative importance of these characteristics vary by industry.

Figure 4: Reasons for Hiring Difficulty



The “other” responses included a range of explanations offered by employers, and while some of these mentioned specific skills desired in jobseekers, the most common response was a perceived lack of a strong work ethic and dependability issues on the part of applicants. Several responses mentioned a low number of applicants and some attributed this to an employer’s rural location, transportation issues, a lack of interest in the particular industry or occupation, as well as increased competition in an improved economy. Several employers mentioned negative characteristics of the job itself such as undesirable work conditions, negative industry perceptions, or the inability to offer higher wages.

Job Vacancy Data

Within the Industry-specific sample, employers were asked additional questions about the number and type of currently vacant positions. Employers were seeking Construction and Production occupations in the largest numbers, followed by Health Care occupations, Engineering occupations, and Office and Administrative occupations. These results reflect the typical hiring patterns of each of the four industries. Employers were also asked about the education, industry certification or licensing, and hiring range associated with their vacancies. Within each industry, there was a range of degrees and licenses required, with Health Care and STEM having higher education requirements and Health Care in particular having more formal licensing and certification requirements. Hiring ranges varied by industry, and no clear correlation exists between levels of pay and hiring difficulties—difficulties occurred to some degree in low-paying as well as mid-paying and high-paying positions.

Information was also collected on the number of years of experience required for each vacant position. Employers were also asked to rank each vacant position on its perceived difficulty to fill, with 1 being “not difficult at all” and 5 being “very difficult to fill.” The mean across each of these four industries was between 3 and 4, indicating the average position was difficult to fill. As might be expected, entry-level positions were easier to fill, with difficulty increasing along with years of required experience. Among vacancies that require five or more years of experience, over half of these positions were rated as “very difficult to fill.”

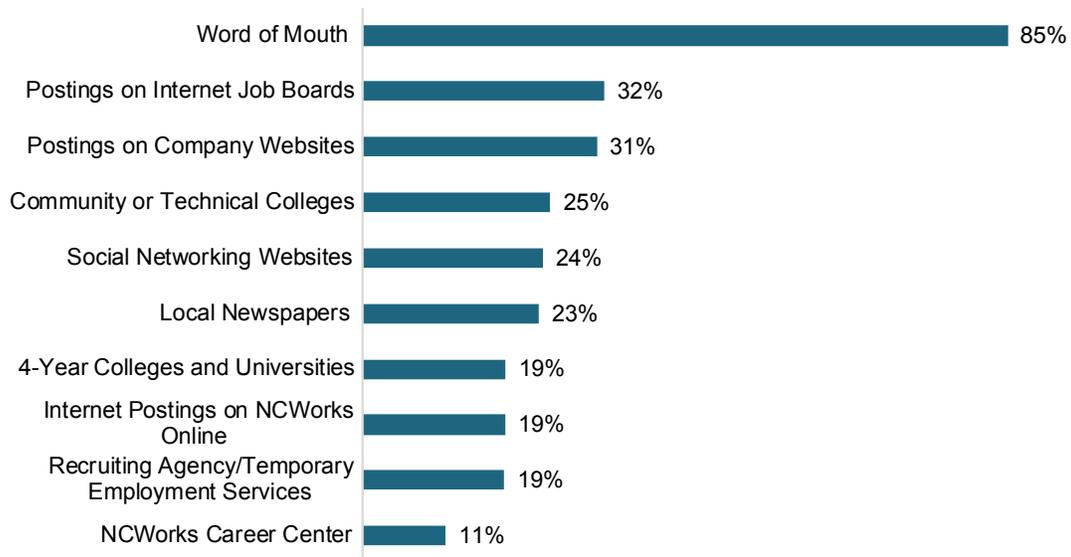
Table 2: Vacancies Rated “Very Difficult to Fill” Among Industry-Specific Sample

Industry	One Year or Less Experience Required	Two to Four Years Experience Required	Five Years or More Experience Required
Manufacturing	23%	30%	50%
Construction	33%	38%	65%
STEM	10%	14%	62%
Health Care	13%	15%	50%

Resources for Recruiting

In order to better understand hiring practices, all employers were asked to identify any of the resources they employ when recruiting. Within the Overall sample, employers chose the following responses:

Figure 5: Resources used by Employers for Recruitment



As seen above, the most frequently used resource by far was “word of mouth,” with over 85 percent of employers using this recruiting approach. Roughly 24 percent of employers rely exclusively on this method, and as might be expected; it is more commonly exclusively used by employers with fewer than 10 employees. However, those using only “word of mouth” were actually less likely to have difficulty hiring.^x Slightly fewer than a third of employers place their job postings on internet job boards (such as CareerBuilder, Indeed or Monster) or their own company websites. About a quarter of employers utilize community or technical colleges to recruit, and similar numbers use social networking sites such as Facebook, LinkedIn or Twitter. Local newspapers are also used by just under a quarter of employers, with smaller percentages of employers using the remaining options listed above.

Among the Industry-specific sample, the general pattern looks the same, with over 85 percent of employers using “word of mouth” and smaller percentages of employers using the other resources in roughly the same proportions as the Overall sample.

Table 3: Resources used by Employers for Recruitment

	Overall	Manufacturing	Construction	STEM	Health Care
Word of Mouth	85%	88%	91%	88%	93%
Internet Postings on NCWorks Online	19%	20%	16%	12%	16%
Internet Postings on Company Job Boards	31%	20%	17%	33%	32%
Postings on Job Boards, i.e. Monster.com or Indeed	32%	32%	24%	37%	37%
Social Networking Websites, i.e. Facebook or LinkedIn	24%	15%	20%	29%	24%
Local Newspapers	23%	28%	25%	16%	39%
NCWorks Career Center	11%	12%	9%	5%	10%
Community or Technical Colleges	25%	21%	19%	27%	36%
4-Year Colleges and Universities	19%	13%	11%	26%	24%
Recruiting Agency/Temporary Employment Services	19%	33%	29%	19%	18%

Highlighted percentages indicate a statistically significant difference from the Overall sample.

A few Industry-specific findings are worth noting. Both Manufacturers and Construction employers are more likely to use recruiting agencies or temporary employment services than the Overall sample. Health Care employers are more likely to use community colleges as well as local newspapers to recruit. Although Health Care employers use “word of mouth” to a greater extent than the Overall sample, they are actually less likely to use it exclusively. STEM employers are more likely to recruit through four-year colleges and universities, but also use the community college system at the Overall rate. STEM employers are less likely to use NCWorks Online or NCWorks Career Centers to recruit.

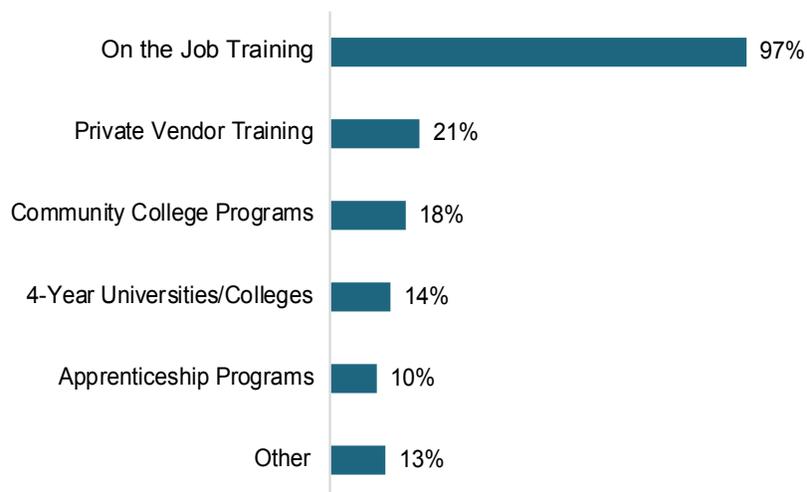
In both the Overall and the Industry-specific groups, establishments of 10 or more employees were significantly more likely to use almost all these resources than very small employers. This may be a result of larger employers’ capacity to carry out recruiting through the use of formal human resources personnel.

Because employer-provided benefits can also be an incentive to attract applicants, employers were asked whether they offered health insurance, paid leave, and/or contributed to a pension or retirement plan. In the Overall sample, about two-thirds of employers offered health insurance, over 70 percent provided paid leave, and about half contributed to a pension or retirement plan. Taken as a whole, 77 percent of employers offered at least one benefit, while 23 percent offered no benefits. Among the Industry-specific sample, Manufacturing had roughly the same percentages, while Construction offered fewer benefits across the board, and STEM and Health Care generally were more likely to offer paid leave and retirement benefits than the Overall sample. As might be expected, establishments of 10 or more workers are more likely to offer benefits in every category for both the Overall and the Industry-specific groups.

Meeting Skill Needs

In addition to recruitment practices, employers were also asked about the resources they use to meet the skill needs of their existing workforce.

Figure 6: Resources used by Employers to Meet Skill Needs, Overall Sample



Nearly all employers selected On-the-Job Training, although it is unclear whether this refers to formal training or not, and to what extent. Private vendor training and community college programs are used by about one fifth of employers, with fewer employers relying on other resources. Among the Industry-specific sample, the same general pattern occurs, although the STEM and Health Care industries

tend to report higher use of resources other than On-the-Job Training, suggesting that these industries may take a broader approach to meeting skill needs. There are not significant differences by employer size for the Overall sample, although some differences exist in the Industry-specific sample for employers of 10 or more employees, who tend to report higher use of resources than very small firms.

Because meeting the skill needs of new and existing workers is a potential solution to some hiring difficulties, it is worth learning more about employers' awareness of existing available resources as well as any barriers to greater utilization. In addition, specifying the types of trainings employers are using (including On-the-Job Training) would be useful to the overall workforce development system in meeting employers' needs.

Anticipating Future Hiring

Employers within the Industry-specific sample were asked about whether they plan to hire within the next 12 months. As with hiring in general, employer size seems to influence future hiring plans:

Table 4: Future Hiring among Industry-specific Employers

Industry	Percent of Employers Planning to Hire	Employers under 10 Planning to Hire	Employers 10 and Over Planning to Hire
Manufacturing	50%	31%	63%
Construction	41%	29%	57%
STEM	46%	35%	67%
Health Care	43%	26%	58%

When asked how many positions employers anticipated filling, the average ranged from 5.3 (Manufacturing) and 5.9 (STEM) to 13.4 positions (Construction and Health Care), while the median response for these four industries was 2 or 3 positions.



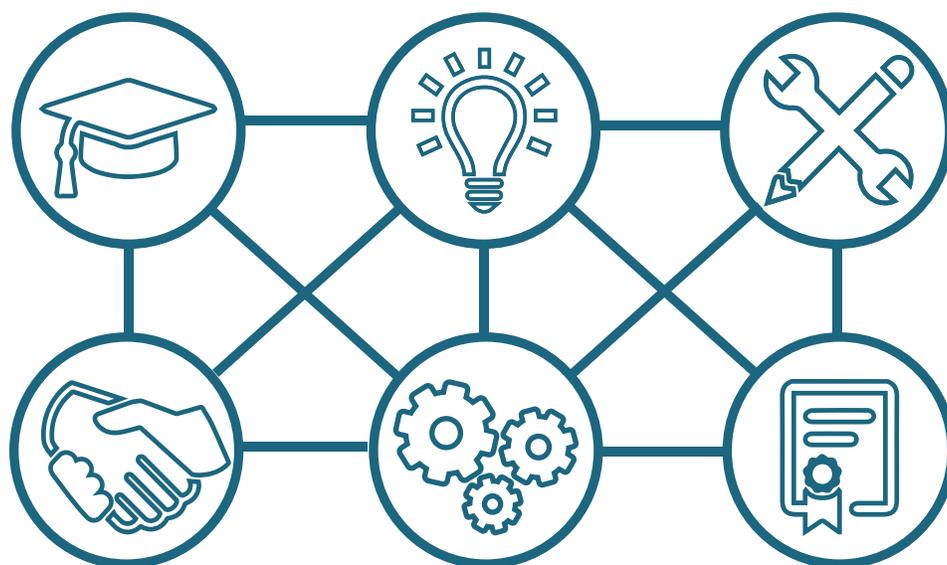
One of the key questions this survey aims to address is the extent to which employers in the state are still experiencing hiring difficulties and whether the explanations for those difficulties have changed. The survey found that despite the general improvement in the economy and labor market conditions between the two surveys, North Carolina's employers are reporting the same level of hiring difficulties as in the 2014 survey, with about 4 out of 10 experiencing any difficulty. The top reasons given for these difficulties again include a perceived lack of relevant work experience, education, and technical and soft skills. There are a few ways to interpret these similar findings. First, it is important to recognize that two years may be too short of a time period to reflect large changes in hiring difficulties, and future iterations of the survey may reveal longer-term trends. While one might expect hiring difficulties to have increased as the unemployment rate decreased (as employers have a smaller pool of unemployed jobseekers to choose among), this is not necessarily true. When unemployment is high and economic conditions are poor, currently employed workers may be reluctant to look for a new employer. If the economy has improved, currently employed jobseekers may be more willing to switch jobs, making more qualified workers accessible to employers. In fact, because a lack of work experience is the most commonly cited reason employers give for hiring difficulties, a tighter labor market may actually provide employers with more qualified applicants.

In the broadest sense, the fact that the two surveys have captured the same level of difficulty may be a sign that we have precisely measured the level of difficulty among all employers in the state. While broad conditions of difficulty are similar in the two surveys, only time and additional data will tell how susceptible hiring difficulties are to changing economic conditions or workforce policies, or advancements in worker training and education. It is also possible that there is some baseline level of difficulty that should be expected among all employers. Here the ability to see differences among the four major industry samples is instructive, as we can see that Manufacturing and Construction employers report higher levels of difficulty than the Overall sample and STEM industries report less difficulty. It is possible that by continuing to examine other industries and/or occupations within industries, further distinctions can be made in order to identify areas of acute problems.

The survey showed that employers use a range of resources to recruit and meet the skill needs of their workforces, although more needs to be known about the quality of On-the-Job Training and whether more formal training practices could be utilized. Within the four industries surveyed, positions requiring five or more years of work experience are much more difficult to fill than entry-level or mid-level positions, suggesting that one policy solution is to provide more formal opportunities for younger workers to gain work experience such as apprenticeships, internships, and other work-study programs.

Another key takeaway from the survey is that there is no one issue that employers are facing—different industries and occupations within industries have different needs—and therefore there is no one single solution to hiring difficulties. Diagnosing specific issues and creating better integration among employers, jobseekers, and the workforce development and education system can potentially help shorter-term needs. Other more longer-term issues, such as developing a younger cohort of workers to acquire new skills and gain opportunities to advance in a career pathway, will require more time and resources. Opportunities exist for all actors in North Carolina’s workforce development system, including the Workforce Development Boards and regional NCWorks Career Centers, to increase their engagement with employers in order to help meet their needs and match jobseekers with jobs.

Areas of future research to help guide policymakers could include repeating this type of statewide, all-industry survey every two years while continuing to refine a focus on particular industries and occupations with hiring difficulties. Regional and urban/rural issues could also be addressed, although this would require greatly increasing the sample size of the current survey or using additional surveys to capture those aspects. Measuring employers’ awareness of available training resources, detailing the specific types of training used by employers (including On-the-Job Training) and identifying barriers to using these resources could also be explored in future iterations. Follow-up research could also investigate issues identified in this survey such as a perceived lack of work ethic and dependability. In addition to survey work, researchers could monitor trends in wage growth to identify emerging labor shortages in the state and refine efforts to measure the supply of, and demand for, labor in the state. Finally, much needed perspective could be gained by surveying jobseekers’ perceptions of obstacles to making good matches with employers.



FOOTNOTES

ⁱ See Barbara Kaviat's "The Big Jobs Myth: American Workers Aren't Ready for American Jobs," in *The Atlantic*, July 25, 2012, for the history of the "skills gap" debate and its ability to mean many things to many different audiences.

ⁱⁱ See "Where Are the Workers?": Assessing Labor Market Mismatch Using the Beveridge Curve" by Andrew Berger-Gross, Labor and Economic Analysis Division, North Carolina Department of Commerce at <http://www.nccommerce.com/lead/research-publications/the-lead-feed/artmid/11056/articleid/29/%E2%80%9Cwhere-are-the-workers%E2%80%9D-assessing-labor-market-mismatch-using-the-beveridge-curve>

ⁱⁱⁱ Previous employers surveys in North Carolina included a 2012 survey by the North Carolina Association of Workforce Development Boards called "Closing the Gap: 2012 Skills Survey of North Carolina Employers" as well as the Greensboro Chamber of Commerce, Greensboro/High Point/Guilford County Workforce Development Board and Human Resource Management Association of Greensboro's "2012 Greater Greensboro Workforce Development Survey" as well as LEAD's 2014 Employer Needs Survey.

^{iv} Peter H. Cappelli. 2015. "Skill Gaps, Skill Shortages, and Skill Mismatches: Evidence and Arguments for the United States." *ILR Review* 68(2): 251-290.) Both Cappelli and Paul Krugman (http://www.nytimes.com/2014/03/31/opinion/krugman-jobs-and-skills-and-zombies.html?_r=2) offer critical takes on the "skills gap" as commonly seen in popular media; for contrary perspectives, see James Bessen's "Employers Aren't Just Whining – the "Skills Gap" Is Real" (*Harvard Business Review*, 2014) <https://hbr.org/2014/08/employers-arent-just-whining-the-skills-gap-is-real/> and Jonathan Rothwell's piece "Understanding Hiring Difficulty: It's Not that Complicated" (*Brookings*, 2014) <http://www.brookings.edu/blogs/the-avenue/posts/2014/07/11-hiring-difficulty-rothwell>

^v See for example, <http://www.infor.com/content/brochures/skillgaps-in-manufacturing.pdf/>

^{vi} See for example, <https://www.pwc.com/us/en/people-management/publications/assets/pwc-solutions-close-talent-gap.pdf>

^{vii} Available at <http://www.nccommerce.com/Portals/11/Documents/Commission/2014%20Employer%20Needs%20Survey.pdf>

^{viii} The industry mix of the achieved sample for both samples is similar to the state. The achieved samples have a higher percentage of establishments with more than 10 employees and a lower percentage of establishments with fewer than 10 employees than the state as a whole.

^{ix} For example, the state's annual unemployment rate in 2013 was 7.9 percent, 6.3 percent in 2014, and 5.7 percent in 2015. Source: Local Area Unemployment Statistics, North Carolina Department of Commerce.

^x In the Overall sample, only 18 percent of employers that used "word of mouth" exclusively had hiring difficulty, while 41 percent of those who did not use "word of mouth" exclusively had difficulty. This difference can be explained by the fact that those organizations having difficulty tended to use more resources in general, as one might expect.

Industry of Overall Sample

Industry	# of Establishments	% of Respondents
Agriculture, Forestry, Fishing & Hunting	5	1.2
Mining	0	0.0
Utilities	2	0.5
Construction	38	8.9
Manufacturing	19	4.4
Wholesale Trade	27	6.3
Retail Trade	82	19.2
Transportation & Warehousing	9	2.1
Information	2	0.5
Finance & Insurance	20	4.7
Real Estate, Rental & Leasing	29	6.8
Professional & Technical Services	50	11.7
Management of Companies & Enterprises	2	0.5
Administrative & Waste Services	20	4.7
Educational Services	3	0.7
Health Care & Social Assistance	47	11.0
Arts, Entertainment & Recreation	5	1.2
Accommodation & Food Services	43	10.1
Other Services (Except Public Admin.)	24	5.6
Public Administration	1	0.2
Total	428	100

Industry Subsector of Industry Samples (From Manufacturing, Construction, STEM, & Health Care)

Industry	# of Establishments	% of Respondents
Construction		
Construction of Buildings	89	6.0
Heavy and Civil Engineering Construction	37	2.5
Specialty Trade Contractors	230	15.6
Manufacturing		
Food Manufacturing	18	1.2
Beverage and Tobacco Product Manufacturing	5	0.3
Textile Mills	14	1.0
Textile Product Mills	9	0.6
Apparel Manufacturing	14	1.0
Leather and Allied Product Manufacturing	1	0.1
Wood Product Manufacturing	24	1.6
Paper Manufacturing	6	0.4
Printing and Related Support Activities	34	2.3
Petroleum and Coal Products Manufacturing	1	0.1
Chemical Manufacturing	11	0.8
Plastics and Rubber Products Manufacturing	19	1.3
Nonmetallic Mineral Product Manufacturing	23	1.6
Primary Metal Manufacturing	1	0.1
Fabricated Metal Product Manufacturing	65	4.4
Machinery Manufacturing	38	2.6
Computer and Electronic Product Manufacturing	9	0.6
Electrical Equipment, Appliance, & Component Manufacturing	9	0.6
Transportation Equipment Manufacturing	12	0.8
Furniture and Related Product Manufacturing	36	2.4
Miscellaneous Manufacturing	27	1.8
STEM		
Publishing Industries (except Internet)	10	0.7
Telecommunications	12	0.8
Data Processing, Hosting, and Related Services	2	0.1
Other Information Services	7	0.5
Professional, Scientific, and Technical Services	328	22.3
Health Care		
Ambulatory Health Care Services	233	15.8
Hospitals	3	0.2
Nursing and Residential Care Facilities	45	3.1
Social Assistance	101	6.9
Total	1,473	

Missing cases: 2

How many employees (full-time & part-time) are at this location?

Overall

Employees	Frequency	Percent
1-4	132	31%
5-9	106	25%
10-19	76	18%
20-49	60	14%
50-99	24	6%
100-249	18	4%
250-499	7	2%
500+	2	1%
Total	425	100%

Missing cases: 3

Manufacturing

Employees	Frequency	Percent
1-4	73	19%
5-9	79	21%
10-19	62	17%
20-49	83	22%
50-99	29	8%
100-249	34	9%
250-499	13	4%
500+	3	1%

Construction

Employees	Frequency	Percent
1-4	125	35%
5-9	72	20%
10-19	76	22%
20-49	48	14%
50-99	21	6%
100-249	6	2%
250-499	2	1%
500+	3	1%

Missing cases: 3

STEM

Employees	Frequency	Percent
1-4	132	37%
5-9	94	26%
10-19	68	19%
20-49	44	12%
50-99	13	4%
100-249	5	1%
250-499	0	0%
500+	0	0%

Missing cases: 3

Health Care

Employees	Frequency	Percent
1-4	81	21%
5-9	103	27%
10-19	82	22%
20-49	66	17%
50-99	20	5%
100-249	23	6%
250-499	2	1%
500+	3	1%

Missing cases: 4

Are you currently hiring for any positions at this location?

Manufacturing

	# of Establishments	% of Respondents
Yes	91	24%
No	282	76%

Missing cases: 3

Construction

	# of Establishments	% of Respondents
Yes	76	21%
No	278	79%

Missing cases: 2

STEM

	# of Establishments	% of Respondents
Yes	75	21%
No	282	79%

Missing cases: 2

Health Care

	# of Establishments	% of Respondents
Yes	102	27%
No	280	73%

Missing cases: 2

How many different positions are you hiring for at this location?

	# of Cases	Mean # Positions Hiring	Median # Positions Hiring
Manufacturing	88	1.83	1
Construction	74	1.91	1
STEM	75	2.04	1
Health Care	97	3.57	1

Approximately how many positions has your establishment tried to fill in the past 12 months?

Overall

Hiring in the past 12 months	# of Establishments	% of Respondents
Tried to hire in past 12 months	288	68%
Did not attempt to hire in past 12 months	134	32%

Missing data: 6

Did the establishment try to fill a position in the past year?

Industry	# estbs that tried to hire last year	%	# estbs that either tried to hire in past year or currently have positions open	%	# estbs that did NOT try to hire in past year and currently DON'T have positions open	%	# of Cases	Missing
Manufacturing	222	59%	246	66%	128	34%	374	2
Construction	194	55%	215	61%	138	39%	353	3
STEM	195	55%	211	59%	144	41%	355	4
Health Care	228	60%	261	69%	118	31%	379	5

Has your establishment had difficulty filling any positions in the past 12 months?

Sample	No	Yes	% Yes
Overall	183	105	37%
Manufacturing	118	100	46%
Construction	93	96	51%
STEM	136	55	29%
Health Care	153	74	33%

What is your experience filling positions this year?

	Overall	%	Mfg.	%	Const.	%	STEM	%	Health Care	%
More Difficult than Last Year	64	19%	75	23%	84	28%	50	16%	62	18%
About the Same as Last Year	235	70%	220	68%	192	64%	225	74%	230	68%
Easier than Last Year	38	11%	28	9%	24	8%	30	10%	44	13%
DK/NA/Missing	91		53		56		54		48	
# of Cases	428		376		356		359		384	

How important is it to fill positions?

Question	Mean	# of Cases
How important was it to your establishment to fill these difficult to fill positions?	4.43	104
In general, how important was it to your establishment to fill positions?	4.45	286
Difference between two by organization (Difficult minus General)	0	104

1=Not Important; 5=Extremely Important

Why was this position difficult to fill?

	Overall	%	Missing	Mfg.	%	Missing	Constr.	%	Missing	STEM	%	Missing	Health Care	%	Missing
Applicants lacked necessary EDUCATION level, certification, or training	64	62%	2	26	26%	0	23	24%	0	19	35%	0	35	47%	0
Applicants lacked technical or occupation-based SKILLS	61	58%	0	53	53%	0	57	59%	0	29	53%	0	32	43%	0
Applicants lacked SOFT SKILLS such as communication, teamwork, critical thinking	55	53%	2	21	21%	0	20	21%	0	20	36%	0	16	22%	0
Applicants lacked relevant WORK EXPERIENCE	70	68%	2	51	51%	0	51	53%	0	28	51%	0	26	35%	0
Applicants had CRIMINAL RECORDS	33	33%	4	12	12%	0	19	20%	0	3	5%	0	7	9%	0
Applicants failed DRUG SCREENING	17	17%	5	19	19%	0	22	23%	0	2	4%	0	10	14%	0
Applicants unwilling to accept offered PAY/COMPENSATION	31	30%	1	9	9%	0	11	11%	0	10	18%	0	19	26%	0
OTHER	23	22%	0	43	43%	0	44	46%	0	16	29%	0	31	42%	0

How many different positions are you hiring for at this location?

Industry	Mean	Median	Mode	Range	Organizations
Manufacturing	2.2	2	1	1-7	149
Construction	2.3	2	1	1-15	119
STEM	2.3	2	1	1-15	115
Health Care	3.4	2	1	1-150	151

How many job openings are there for each position?

Industry	Mean	Median	Mode	Range	Organizations
Manufacturing	2.5	1	1	1-23	144
Construction	1.9	2	1	1-6	109
STEM	2.5	1	1	1-50	99
Health Care	2.0	1	1	1-15	131

Job Titles of Positions by Industry

Major Occupational Group	# of Listed Positions				
	Mfg.	Constr.	STEM	Health Care	Total
Management Occupations	5	10	7	9	31
Business & Financial Operations Occupations	2	2	8	5	17
Computer & Mathematical Occupations	3	0	26	1	30
Architecture & Engineering Occupations	9	7	21	0	37
Life, Physical & Social Science Occupations	0	1	5	0	6
Community & Social Service Occupations	0	0	0	14	14
Education, Training & Library Occupations	0	0	1	15	16
Arts, Design, Entertainment, Sports & Media Occupations	3	0	2	0	5
Healthcare Practitioners & Technical Occupations	0	0	6	38	44
Healthcare Support Occupations	0	0	7	34	41
Protective Service Occupations	0	0	1	0	1
Food Preparation & Serving Related Occupations	1	0	0	6	7
Building & Grounds Cleaning & Maintenance Occupations	0	0	0	5	5
Personal Care & Service Occupations	0	0	0	10	10
Sales & Related Occupations	6	3	4	0	13
Office & Administrative Support Occupations	9	5	11	8	33
Farming, Fishing, & Forestry Occupations	0	0	1	0	1
Construction & Extraction Occupations	10	73	1	0	84
Installation, Maintenance & Repair Occupations	17	9	4	0	30
Production Occupations	77	4	2	0	83
Transportation & Material Moving Occupations	5	2	1	2	10

What is the hiring range for this position?

Industry	Mean Minimum Pay	Median Minimum Pay	# of Cases	Mean Maximum Pay	Median Maximum Pay	# of Cases
Manufacturing	\$31,665	\$24,960	129	\$48,961	\$33,280	132
Construction	\$36,258	\$27,040	102	\$48,938	\$37,440	103
STEM	\$53,484	\$35,000	88	\$72,823	\$50,000	89
Health Care	\$25,355	\$19,708	96	\$31,348	\$26,020	100

What are the minimum degree requirements for this position?

Education Requirement	# of Listed Positions				
	Mfg.	Constr.	STEM	Health Care	Total
No Requirement	57	57	25	30	169
High School/GED	48	34	21	31	134
Vocational Training	12	5	2	11	30
Associate Degree	10	4	11	28	53
Bachelor's Degree	12	10	42	31	95
Graduate Degree	2	1	5	11	19
Total	141	111	106	142	500

Are there License or Certification requirements for this position?

Industry	No Licensing or Certification	Licensing or Certification	% Licensing	# of Cases
Manufacturing	129	14	10%	143
Construction	79	31	28%	110
STEM	77	28	27%	105
Health Care	57	85	60%	142

Missing cases: 18

How many months has the position been vacant?

Industry	Mean	Median	Mode	Range	# of Cases
Manufacturing	3.4	1	1	1-24	132
Construction	5.4	2	1	1-48	83
STEM	1.9	1	1	1-12	88
Health Care	2.5	1	1	1-12	125

What work experience is required for the position?

Work Experience	# of Listed Positions				
	Mfg.	Constr.	STEM	Health Care	Total
Entry Level (1 Year or Less)	75	46	40	89	250
Mid-Level (2-4 Years)	47	46	45	48	186
Senior Level (5 or More Years)	24	21	21	8	74
Total	146	113	106	145	510

Missing cases: 8

How difficult is the position to fill?

Please rate the level of difficulty on a scale from 1 to 5 where 1 is Not at all Difficult and 5 is Very Difficult.

Difficulty	# of Listed Positions				
	Mfg.	Constr.	STEM	Health Care	Total
1- Not at all Difficult	17	6	10	11	44
2	15	6	13	28	62
3	43	25	41	51	160
4	27	30	20	33	110
5- Very Difficult	43	47	23	22	135
Total	145	114	107	145	511
Mean Difficulty	3.4	3.9	3.3	3.2	3.5

Missing cases: 7

Which of the following resources has your establishment used in recruiting efforts?

	Overall	%	Missing	Mfg.	%	Missing	Constr.	%	Missing	STEM	%	Missing	Health Care	%	Missing
Word of Mouth	340	85%	29	317	88%	14	311	91%	15	297	88%	22	344	93%	13
Internet Postings on NCWorks Online	74	19%	35	72	20%	17	55	16%	17	39	12%	25	57	16%	18
Internet Postings on Company Job Boards	122	31%	33	70	19%	17	59	17%	16	111	33%	24	119	32%	15
Postings on Job Boards, such as CareerBuilder, Indeed, or Monster.com	126	32%	33	113	31%	17	80	24%	18	124	37%	24	135	37%	19
Social Networking Websites such as Facebook, LinkedIn, or Twitter	94	24%	33	53	15%	17	69	20%	19	97	29%	24	86	24%	19
Local Newspapers	92	23%	33	102	28%	16	84	25%	17	52	16%	24	143	39%	16
NCWorks Career Center	43	11%	36	42	12%	18	30	9%	17	16	5%	26	37	10%	17
Community or Technical Colleges	98	25%	33	76	21%	17	63	19%	18	89	27%	25	131	36%	16
4-Year Colleges and Universities	75	19%	31	47	13%	17	38	11%	18	88	26%	25	87	24%	17
Recruiting Agency/Temporary Employment Services	74	19%	33	120	33%	15	100	29%	16	65	19%	23	67	18%	14
Other	62			65			68			48			85		
# of Cases	428			376			356			359			384		

Highlighted percentages indicate a statistically significant difference from the Overall sample.

Does your establishment offer the following employer provided benefits?

	Overall	%	Missing	Mfg.	%	Missing	Constr.	%	Missing	STEM	%	Missing	Health Care	%	Missing
Health Insurance	266	67%	30	243	66%	8	170	49%	9	232	67%	15	237	62%	2
Paid Leave	282	71%	28	258	70%	8	216	62%	8	271	79%	15	310	81%	3
Contribution to Pension/Retirement	200	50%	27	163	44%	7	107	31%	8	198	58%	15	217	57%	2
Other	74			62			38			36			63		
Any Benefit	331	77%		301	80%		249	70%		299	83%		336	88%	
No Benefits	97	23%		75	20%		107	30%		60	17%		48	13%	
# of Cases	428			376			356			359			384		

Which of the following resources does your establishment use to meet the skill needs of your workforce?

	Overall	%	Missing	Mfg.	%	Missing	Constr.	%	Missing	STEM	%	Missing	Health Care	%	Missing
On the Job Training	391	97%	1	341	94%	13	312	91%	15	304	89%	18	360	95%	7
Private Vendor Training	84	21%	1	55	15%	12	71	21%	16	82	24%	20	112	30%	8
Community College Programs	70	18%	3	62	17%	15	50	15%	17	57	17%	20	96	26%	9
4-Year Universities/Colleges	56	14%	3	23	6%	15	25	7%	17	54	16%	20	62	17%	10
Apprenticeship Programs	43	11%	3	48	13%	14	42	12%	17	71	21%	20	71	19%	9
Other	52	13%	0	29	8%	0	33	9%	0	42	12%	0	53	14%	0
# of Cases	403			376			356			359			384		
None Across the Board*	25			0			0			0			0		

*Note: All cases that provided 0s for each category were considered to be missing, and were not used in calculating %. These are found in 'None Across the Board.'

Highlighted percentages indicate a statistically significant difference from the Overall sample.

Excluding current vacancies, do you plan to hire within the next 12 months?

Industry	Frequency that plan to hire	% plan to hire	Missing
Manufacturing	167	50%	42
Construction	131	41%	39
STEM	141	46%	52
Health Care	149	43%	36

How many positions do you anticipate filling?

Industry	Average	Median	Mode	Range	# of Cases
Manufacturing	5.3	3	1	1-120	150
Construction	13.4	3	2	1-300	114
STEM	5.9	2	1	1-120	129
Health Care	13.4	2	2	1-700	111

