

MINNESOTA ECONOMIC

TRENDS

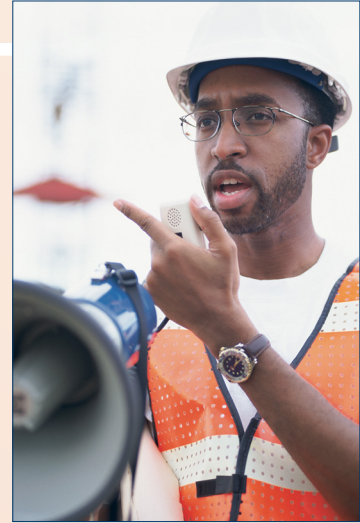
HELP WANTED

HOW WORKERS FROM DIVERSE
BACKGROUNDS CAN HELP THE
CONSTRUCTION INDUSTRY
REBUILD ITS WORKFORCE

DECEMBER 2016

m EMPLOYMENT AND
ECONOMIC DEVELOPMENT

Diversifying the Construction Workforce



The Minnesota construction sector was hit harder than any other industry during the recession, losing nearly 38,000 jobs, an astonishing 32 percent drop in employment.

While construction employment still hasn't returned to its pre-recession peak, the industry is growing again and is finding it increasingly difficult to fill positions, according to the cover story by Oriane Casale in this issue of Trends.

Many of the construction workers who lost jobs during the recession – generally white males – have long since moved on to other careers or retired. With fewer young people showing interest in construction careers these days and the white working-age population continuing to shrink, the industry will be challenged to rebuild its talent pool.

The solution might be found in two groups that have been historically underrepresented at construction worksites – people of color and women. Casale says they will be essential to addressing the industry's employment needs in coming years.

People with disabilities are another demographic group with a history of being underrepresented in the workforce. Mohamed Mourssi-Alfash's story that begins on Page 9 documents that people with disabilities trail the overall population in virtually every measure of the labor market, from the unemployment rate to labor force participation.

In a related story, Mourssi-Alfash and Ann Feaman point to the state's new Connect 700 program as a cause for hope in the disability community. Launched by Gov. Mark Dayton last October, the program aims to increase the number of people with disabilities in the state government workforce. If it succeeds, Connect 700 could become a role model for promoting disability hiring across the country.

Elsewhere in this issue, Steve Hine and Matt Bombyk look at how many occupations in Minnesota require more than a high school education – not as many as you might think – and Chloe Campbell examines the growing demand for home health aides and personal care aides.

There's a lot to learn and think about in this issue. We hope you enjoy it.

A handwritten signature in black ink that reads "Monte Hanson". The signature is written in a cursive, flowing style.

Monte Hanson
Editor

Table of

CONTENTS



The Case for Diversifying Construction 2

Oriane Casale



The Disability Employment Gap, by Type of Disability.9

Mohamed Mourssi-Alfash



Growing Demand for Caregivers. . . . 15

Chloe Campbell



Educational Needs of the Workforce. . 20

Steve Hine and Matt Bombyk

Connect 700: New Hope for Minnesotans with Disabilities27

Ann Feaman and Mohamed Mourssi-Alfash

The Case for Diversifying Construction

Construction is among the industries that are finding it increasingly difficult to find skilled workers. People of color and women hold the key to filling future job openings.



PHOTO: SARAH LECHOWICH

The construction industry is attractive for job seekers because of the wages, job availability and low educational requirements. This fast-growing, medium-sized industry pays above-average wages to its 121,741 workers in Minnesota. The vast majority of job openings require only a high school diploma, and the industry

offers many opportunities for on-the-job training and formal apprenticeships.

Construction is among many industries that are finding it increasingly difficult to fill open positions. Baby boomer retirements combined with smaller post-baby boom generations are causing labor

force growth to slow and even stall out entirely in some parts of the state.

Retirement is hitting even sooner in construction than in other industries in Minnesota because construction workers tend to retire at younger ages. Will employers be able to fill construction jobs with qualified workers over the next several decades?

Although construction has many attractive characteristics for job seekers and career explorers, it is the third-least-diverse industry in Minnesota (behind the much smaller mining and utilities industries). Since most of the current growth in Minnesota's labor force is in nonwhite populations, diversification is essential for this growing industry and an especially good fit for an industry that relies on younger-than-average workers.

Thanks to partnerships with colleges, the industry is beginning to benefit from a new,

young and diverse workforce with a little experience and education already under its belt. This article will explore what it will take for Minnesota's construction industry to stay fully staffed and continue to grow over the next 10 to 20 years.

Help Wanted!

Construction is the 10th-largest of the 20 industrial sectors in Minnesota. It was hit harder during the Great Recession than any other industry. Construction employment fell more than 32 percent (down 37,600 jobs) in just five years between 2006 and 2010. Since then, construction has grown steadily but is still off 5.9 percent from its 2005 peak of 129,400 jobs.

Construction in Minnesota grew 7 percent annually in 2014 and 2015, followed by some slowing in 2016. These growth rates were far faster than Minnesota's all-industry growth of 1.4 percent in 2014 and 1.5 percent in 2015 and are consistent with a slight slowing of overall growth in 2016.

Construction is projected to be the second-fastest-growing industry sector, after health care and social assistance, between 2014 and 2024, with the addition of almost 10,300 jobs in Minnesota. In fact, the industry is on track to exceed that

projection in 2016 if it continues to hold steady in the last quarter of the year. (Data was only available through October at the time this article was written.)

Other dynamics in Minnesota's construction industry are compounding the demand for new workers. First, construction tends to be a young industry, with more people retiring or leaving the industry before age 55 than is typical across all industries. The largest group of workers by age, however, is those 45 to 54. This group represented a slightly higher share of the industry (22.6 percent) than across all industries (21.8 percent) in 2015. This means that within the next decade a larger share of workers in construction will retire than across all industries. These are also the workers with the most skill and experience.

Second, as the industry shed jobs during the Great Recession, many people left it altogether, retiring or finding jobs in other industries. At the same time, many high schools and colleges dropped construction and vocational programs that helped to feed the workforce pipeline. Without any experience or background in the field, fewer young people are showing interest and the sector is having a more difficult time recruiting.

The industry is now attempting

to rebuild its workforce. The number of job vacancies in construction grew from 710 during second quarter 2009 to 6,700 during second quarter 2016, despite slower overall employment growth in 2016.

This 841 percent increase in openings compares with a 211 percent increase in openings overall in Minnesota over the eight-year period. These 6,700 construction vacancies translate into an above-average vacancy rate of 5.5, meaning that for every 100 filled jobs, 5.5 were vacant in the industry. This compares to an overall vacancy rate of 3.6 percent, another indicator that construction firms are in hiring mode. This strong demand for workers explains why construction employers are having a difficult time staying fully staffed.

A Good Career Option?

Construction is an attractive industry for workers, particularly those who want a career option that does not require post-secondary education. The industry pays above-average wages. In 2015 the average weekly wage in construction was \$1,178 compared with \$1,030 for all industries in Minnesota. Median hourly wage offers in construction occupations were \$17.99 compared with \$14 for all jobs during second quarter 2016.

Despite above-average wages, only about 20 percent of construction vacancies required post-secondary education compared with 36 percent across all industries in Minnesota during second quarter 2016. Fifty percent of construction vacancies required experience of at least a year, and 25 percent required a license or certificate.



PHOTO: SARAH LECHOWICH

Education requirements in construction tend to be low because the industry follows a different model for training workers, not because the jobs are low skilled. Employers and unions routinely provide training in the form of entry-level jobs that provide informal training as well as more formal on-the-job training arrangements such as apprenticeships.

Formal apprenticeships are available in a range of construction occupations, including electrical, plumbing, carpentry, cement masonry, drywall installation, painting, roofing and other occupations.

Construction-related certificates and associate degrees are available through technical schools and community colleges in a number of different programs, including carpentry, electrical and power transmission installation, building/construction, finishing, management and inspection, and plumbing and related water supply services. But many workers pursue these only after years on the job as a way to qualify for more skilled and higher-paying positions.

Construction is a highly seasonal industry in Minnesota, which is a downside for many workers. Industry employment regularly shrinks by 73 percent between August and February of the following year, amounting to, for example, a drop of 30,000 jobs between August 2015 and February 2016. These seasonal patterns are offset, however, by the fact that most workers in the industry qualify for unemployment insurance, providing some income stability. Another downside to working in construction is the need to move from site to site and sometimes from employer to employer as

jobs end and others become available.

Demographics of the Workforce

Minnesota's construction workforce has several unique aspects. The median age of Minnesota construction workers was approximately 40 in 2015, compared with 43 across all industries in the state. While younger on average, industry workers also tend to be more clustered into the prime working-age years – with 72 percent between the ages of 25 and 54 compared with only 64.5 percent of workers across industries. This is partly because of labor laws that keep very young workers from the industry due to safety concerns, and partly because construction workers tend to retire from or leave the industry at younger ages than workers across all industries. Only 18 percent of construction workers were 55 or over, while 22.2 percent of all workers fell into that age category in Minnesota in 2015.

It will not come as a surprise that the construction industry is still dominated by men, who represented 86.4 percent of the workforce in 2015. This is down less than 2 percentage points from 1995. Currently, 17,300 women work in the industry in Minnesota, comprising 13.6 percent of the workforce.

With only 4.8 percent of its workforce comprised of people of color, the construction industry was the third-least-diverse industry sector in Minnesota in 2015, behind mining and utilities. This is up from 3.5 percent just five years ago, when the industry was the second-least-diverse sector statewide. The industry was slightly more racially diverse, relative to the diversity of the total labor force, in 2005 prior to the recession.

The industry has increased its share of people of color each year since 2011, when it began to rebuild its workforce after the recession in Minnesota. Minority hiring in construction, however, has just barely kept pace with the rate of diversification of Minnesota's workforce overall. The share of minority-held jobs in construction in 2015 was 4.8 percent, compared with 11.7 percent across all industries. In 2010, the share of minority-held jobs in construction was 3.3 compared with 10.3 percent across all industries.

Diversification

As hiring continues, the industry inevitably will diversify, both in terms of the race and gender of its workers. The current slow pace of diversification, however, means that the industry is losing out on a young and growing workforce.

While the white working-age population (age 18 to 64) in Minnesota continues to shrink, down 6,875 people from 2013 to 2014 alone, the number of workers who are people of color, including immigrant populations, continues to grow, up 27,900 over that period.

Between now and 2030, Minnesota's younger minority population will grow by 37.3 percent, while the white alone population will grow by only 4.1 percent, mostly among people 65 and older.

The reasons for these stark differences by race in growth of working-age populations are at least twofold. For one, the white population is "aging out" into its retirement years at a much faster rate than Minnesota's minority population.

Secondly, there continues to be a significant influx of foreign-born immigrants who are typically in that working-age cohort. In most cases, industries that are not hiring minority workers will not be able to fill open jobs.

Help for Employers

Construction is not an industry that women or certain minority groups, including blacks, traditionally have seen as a viable career option. Many within these demographic groups are not familiar enough with the work to feel comfortable applying for jobs or feel excluded based on the current and historic demographics of the industry. This might make it more difficult for employers to recruit and even retain workers from these groups.



Moreover, the construction industry imposes barriers to entry, primarily in the form of an opaque hiring process and work culture that can serve to keep people unfamiliar with the industry out and that can lead to high turnover among new hires. Other barriers to retention are the layoff cycle that can make it easy to lose new entrants.

Trading Up at Saint Paul College, a collaboration between government, employers, unions and education, is directly addressing these issues. The program was first funded in 2014 through a grant from DEED's Minnesota Job Skills Partnership and includes partnerships with the Saint Paul Building & Construction Trades Council, Minnesota Department of Labor & Industry, Workforce Solutions

(Ramsey County), Helmets to Hardhats, Washington County Workforce Center and construction trades companies.

Participating businesses include the following: Collins Electrical Construction Co., Hunt Electric Corp., Muska Electric Co., Muska Plumbing LLC, Harris Mechanical, McGough, Corval Group, Swanson & Youngdale, International Union of Painters and Allied Trades District Council #82, Nasseff Mechanical, Total Construction, Medina Electrical, CBI, Pioneer Power, Rainbow, Scheck Mechanical and Mechanical Operations.

To qualify, applicants must be receiving public assistance in Minnesota or have a household income at or

below 200 percent of poverty. Trading Up participants receive individualized assessment and career guidance counseling from a career navigator to make sure each trainee finds the trade that best suits his or her abilities and interests. During the training phase of the program, participants explore a variety of skilled trades through visits to apprenticeship training centers and hands-on experience.

"The goal of Trading Up is to provide a bridge for students to enter construction who would otherwise not have either the qualifications to succeed in the industry or even the knowledge of how to apply for construction jobs," said program director Sarah Lechowich.

Lechowich said the industry as a whole is very concerned about workforce and skills shortages as it attempts to replace retirees and grow its workforce.

"It takes a while to get an apprentice through a program, three to five years," she said. "Unions and employers realize that you need to get people trained and ready before you lose the institutional knowledge." **T**



PHOTO: SARAH LECHOWICH

Trading Up welding class participants.

Q&A With Sarah Lechowich

The following interview was conducted with Sarah Lechowich, Trading Up program director.

Trends: *Do your contacts in construction say that it is difficult to find qualified workers?*

Lechowich: Finding skilled workers and retention are both difficult. We use the Multi-Craft Core (MC3) Curriculum designed by and for the construction industry. The curriculum addresses hard and soft skills. We also introduce students to union culture and the apprenticeship structure.

Construction is very different from other industries. You have to learn how to live and breathe within the culture. You have to understand how layoffs work, what is collective bargaining, what is an apprenticeship training, what am I signing? We try to set the students up for success by answering those types of questions.

Each student has a trainer/mentor, mostly retired or older construction workers. Students can get real answers about what they're walking into and what it is going to be like. Things like what was it like your first day, what do you wish you would have known? What is the best lunch box? What brand of boots should I avoid? A big part of the

program is really about building relationships.

Trends: *What are the barriers to entry imposed by the construction industry? How do you work with the industry and your students to mitigate these?*

Lechowich: What I've learned is that the entry points are different for each different specialty area in construction. This can create a convoluted process for job seekers. In some specialty areas you have to be hired by a union and then a contractor takes you on. In some it is the opposite. In some areas hiring is done year-round and in others there are special times or days or even years when you can bring your application. You need to know someone who knows what those windows are to be able to know when to even apply.

We take an individualized path — where do you want to be at the end of this program? We visit JATC — apprenticeship training centers — basically like a university system. We talk about different pathways. Depending on their construction interests, some students might need to take specific classes — math or welding, for example — to make



PHOTO: LISA MILLER

themselves more competitive. Or we just help them figure out entry points or entry dates, help them find pre-apprentice or helper jobs to get their foot in the door.

Trends: *What is your success rate with job retention?*

Lechowich: We serve a wide variety of people, and some just aren't ready to enter construction when they start with us. People who don't have driver's licenses, I can't place in construction. We place them in employment, help with some wrap-around services to get them stabilized, then set them on the path toward construction once they can get a driver's license and a reliable vehicle. You have to have some personal wealth before you can

work a construction job. That is one problem with retention. If that vehicle fails, retention suffers.

Each wave is unique. Of five waves, we've had 133 folks recruited, 45 placed, we lost 41 who didn't complete. Of the 41 who didn't complete, sometimes it is a lack of interest, sometimes it is due to other barriers like losing housing, an arrest, the need to care for a sick mom.

Trends: *In your own words, what are some reasons people of color and women don't apply for construction jobs in the first place? Is it lack of experience, lack of role models, or barriers to entry imposed by the industry, like simply not knowing how to apply for the jobs?*

Lechowich: I think everyone agrees that there are barriers. There are barriers on different sides of the coin. Participants in Trading Up lack knowledge and understanding of the industry. Many lack the stability needed to hold down a demanding job. Many lack a driver's license — an absolute must in any construction job — or child care. Many do not understand financial planning to accommodate regular layoffs. If you don't have any family history of that, you may have difficulty planning the financial aspect of a construction career. We spend a lot of time on how to plan. You have to have a lot of structure to



PHOTO: SARAH LECHOWICH

function well in the construction industry, so part of it is learning that structure.

On the employer side, I don't think there is much debate that it is a traditional industry. But construction employers do realize they need to work on inclusion, in part because retention is difficult. Inclusion is the difference between being invited to the party and being asked to dance once you arrive. Some of the questions I ask them is, "Do we expect new employees to act like us or are we welcoming of different ways of doing things, seeing things?" Diversity doesn't always have to mean your traditional gender and race but also geographic diversity. Growing up in a rural environment, you might have a different viewpoint than growing up in an urban environment.

One goal of the program is to try to get people to relate and have conversation. We have a Minnesota state grant to do bias training. We work with students to name, label and identify things that are happening so that they can then decide what to do about it, if anything.

On the flip side, we are working with industry. A part of the training we do is that we are not always fair to people who did not grow up the way we did. We've worked with 48 people in industry — using a curriculum called Measuring Stick. How do you measure yourself and, knowing that, how do you measure other folks? We try to get people to understand other perspectives and implicit bias.

I've led a total of 11 workshops — it's been a really rewarding experience. I expected more pushback, but if you conduct the discussions without judgment or shame, it can be very rewarding for everyone involved. A unique workshop on implicit bias had both employers and workers. The conversation was both unique and beautiful. Everyone walked away smiling. Both journeymen and employers admitted that they came with bias. That is when the magic took place. **T**

The Disability Employment Gap by Type of Disability

People with disabilities face challenges in the labor market, both in Minnesota and nationally.

There is a substantial gap between the goal of integrating people with disabilities into the labor force and their actual levels of participation. Labor force disparities for people with disabilities also vary from one type of disability to another, resulting in some groups showing higher or lower rates of participation than others.

This article explores disability definitions, prevalence of disabilities and labor force disparities that are often associated with disability. Labor force metrics for Minnesotans with disabilities are compared with national metrics. The article focuses on the non-institutional working-age population between the ages of 21 and 64. Data and analyses in this article are based on one-year estimates from the 2014 American Community Survey.

Definitions of Disability

Though there is not one standard definition of disability, this article considers the definition adopted by the U.S. Census



Bureau. The Census Bureau uses the definition found in the Americans with Disabilities Act (ADA), which defines disability as an individual's physical or mental impairment that substantially limits one or more major life activities. The Census Bureau collects data on disability in six categories:

- Vision difficulty: Blindness or serious difficulty seeing, even when wearing glasses.
- Hearing difficulty: Deafness or serious difficulty hearing.
- Cognitive (intellectual)

difficulty: A physical, mental or emotional problem leading to difficulty remembering, concentrating or making decisions. This is the most disadvantaged type of disability in the labor market.

- Ambulatory difficulty: Serious difficulty walking or climbing stairs.
- Self-care difficulty: Difficulty bathing or dressing.
- Independent living difficulty: Difficulty doing errands alone, such as visiting a doctor's office or shopping.

Disability Prevalence by Type of Disability in the Working-Age Population

The 2014 American Community Survey (ACS) one-year estimates show that the six categories of disability were prevalent in the population at varying levels. Chart 1 indicates that general disability prevalence in Minnesota is lower than the national level, as well as in all categories of disability. The general disability prevalence rate in the working-age population in Minnesota was 8.8 percent compared with 10.8 percent nationally.

Out of the six disability types reported in the ACS, cognitive difficulty was the most frequently reported disability type in Minnesota, at 4.2 percent, while ambulatory difficulty was the most frequently reported nationally, at 5.5 percent. The lowest prevalence rate in Minnesota was vision difficulty, at 1.3 percent, while nationally it was self-care difficulty, at 1.9 percent.

Participation in the Labor Force

In general, Minnesota ranks among the highest in labor force participation in the overall population and in the groups covered in this article. ACS data indicate that people with disabilities are less likely to

participate in the labor force than people with no disabilities.

Chart 2 shows that in 2014 the rate of labor force participation

in the working age population with any disability was 48.7 percent in Minnesota and 8.1 percentage points lower nationwide. In the same age

CHART 1

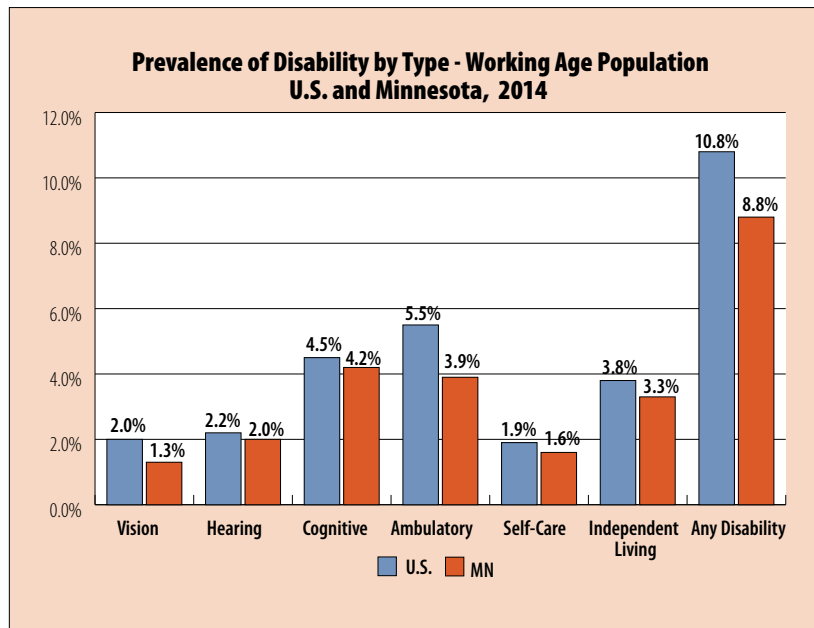
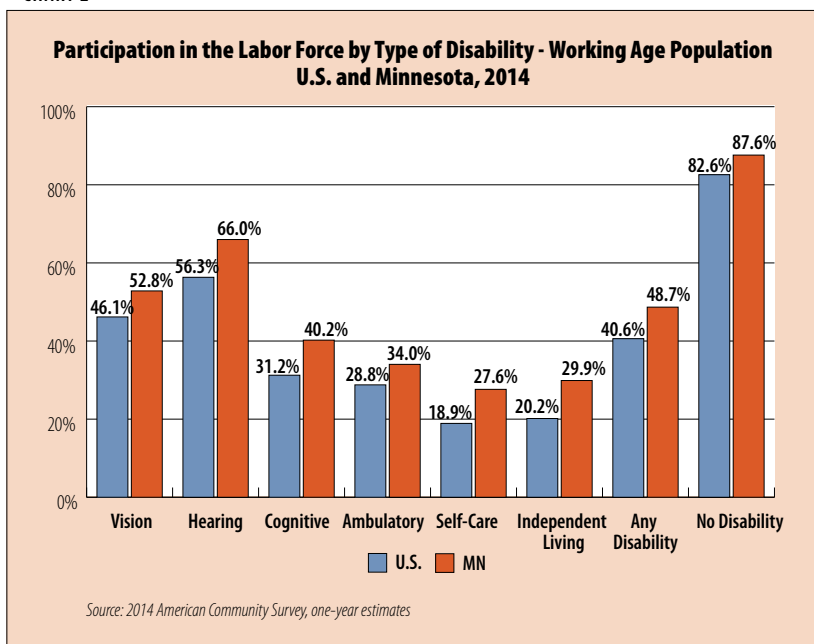


CHART 2



group with no disability, the rate was 82.6 in the U.S. and 87.6 in Minnesota. The gap between participation in the working-age labor force with and without disabilities was 38.9 points in Minnesota and 42 points nationwide.

Among the six types of disabilities identified in the ACS, the highest rate of participation in the labor force was for people with hearing disability, at 66 percent in Minnesota and 56.3 percent nationally. The lowest participation rate was for people with self-care disability, at 27.6 percent in Minnesota and 18.9 percent nationally.

Employment Ratio

Employment ratio is another important labor market benchmark that measures the proportion of the working-age population that is employed. Similar patterns of disparity between people with and without disabilities are evident in this measure.

In 2014, the employment ratio of working-age people with disabilities in Minnesota was 44 percent compared with 34.6 percent in the U.S. The employment ratio of working-age people without disabilities in Minnesota was 84.3 percent compared with 77.6 percent

nationally. The gap between employment ratios of working-age people with and without disabilities was 40.3 percentage points in Minnesota, compared with 43.0 percentage points in the U.S.

Among the six types of disabilities reported in the ACS, Table 1 shows that the hearing disability group had the highest employment ratio, at 62.5 percent in Minnesota and 51.2 percent nationwide. The lowest employment ratio at both the state and national level was for people with a self-care disability, at 25.7 percent in Minnesota and 15.5 percent nationally.

TABLE 1

Working Age Population with Disability, U.S. and Minnesota, 2014

Working-Age Population with Disability								
	Vision	Hearing	Cognitive	Ambulatory	Self-Care	Independent Living	Any Disability	No Disability
U.S.	3,692,900	3,980,800	8,179,900	10,116,500	3,545,000	6,977,300	19,754,700	163,511,000
MN	42,400	63,800	133,000	125,200	51,400	105,400	280,000	2,894,100
Employed Working-Age Population with Disability								
	Vision	Hearing	Cognitive	Ambulatory	Self-Care	Independent Living	Any Disability	No Disability
U.S.	1,492,700	2,037,700	1,979,700	2,449,500	548,700	1,113,800	6,840,200	126,901,900
MN	21,600	39,900	45,900	37,600	13,200	27,300	123,200	2,439,200
Employment to Population Ratio of those with Disability								
	Vision	Hearing	Cognitive	Ambulatory	Self-Care	Independent Living	Any Disability	No Disability
U.S.	40.4%	51.2%	24.2%	24.2%	15.5%	16.0%	34.6%	77.6%
MN	50.90%	62.5%	34.5%	30.0%	25.7%	25.9%	44.0%	84.3%

Source: 2014 American Community Survey, one-year estimates



Unemployment Rate

The gap between the unemployment rate of those with and without disabilities in Minnesota and the U.S. is substantial. In 2014, the unemployment rate for working-age people with any type of disability was 9.6 percent in Minnesota and 14.8 percent nationally. This compares with 3.8 percent in Minnesota and 6 percent nationally for those with no disability.

As shown in Chart 3, unemployment rates vary across types of disability. Of the disability types, those with hearing difficulty reported the lowest unemployment rate in the U.S. at 9.1 percent, while in Minnesota this group had the second-lowest unemployment rate at 5.2 percent.

The second-lowest unemployment rate nationally was among those with vision difficulty, at 12.5 percent. In Minnesota the unemployment rate for this group was 3.6 percent, ranking it the lowest among the six types of disability. The highest unemployment rate was observed among those with a cognitive disability, at 14.2 percent in Minnesota and 22.5 percent nationally. This indicates that people with cognitive disability struggle to find or maintain employment more than those with other types of disability.

Full-Time, Full-Year Employment

This section provides a measure of job quality of working-age people with disabilities. Although part-time or intermittent/seasonal work is sometimes a voluntary choice, full-time, year-round employment tends to be of higher quality for two reasons: It more often comes with health insurance and retirement benefits and it tends to offer more opportunities for career advancement. Employees are considered full-time if they work 35 or more hours a week and full year if they work at least 50 weeks per year.

The data in Chart 4 indicate that the full-time, full-year employment rate in

the employed working-age population with a disability was lower in Minnesota, at 55.3 percent, than nationally, at 62.5 percent. Similarly, in the employed working-age population with no disabilities, Minnesota's rate of 73.8 percent was slightly lower than the national rate of 74.3 percent.

The most likely explanation for why the state-national gap is so much bigger for people with disabilities than those without disabilities is because of Minnesota's policy of segregated employment for people with disabilities. This policy allows employers to hire people with disabilities to do parts of a job and get paid less than the minimum wage, based on the extent to which a worker's performance is limited. In no case, however, may pay fall below 50 percent of the minimum wage. While this may increase overall employment, it has the tendency to lower average job quality for people with disabilities by allowing for lower wages and more part-time hours.

As was the case with other labor force characteristics, the full-time, full-year employment rate varies across types of disability, with hearing difficulty showing the highest rate, at 66.4 percent in Minnesota and 71.3 percent nationally for full-time, full-year employment status. The vision difficulty group ranked second at

63.4 percent in Minnesota and 66.2 percent nationally.

The most disadvantaged group in the share of full-time, full-year employed was the group with an independent living disability, which reported 27.8 percent in Minnesota and 46.5 percent nationally, followed by the cognitive disability group with 39.4 percent in Minnesota and 48.5 percent nationally.

Poverty

In both Minnesota and the U.S., people with disabilities are much more likely to have incomes below the poverty level than are people of the same age group who do not have disabilities. This can be largely explained by lower rates of labor force participation, lower employment-to-population ratios, higher rates of unemployment and lower rates of full-time, full-year job holding.

The Federal Poverty Level, a measure of income, is set at three times the cost of a minimum food diet in 1963, updated annually for inflation and calculated for individuals and families of different sizes. Individuals and families with pre-tax cash income at or below these thresholds are considered to be in poverty. The poverty threshold for a family of four in 2014 was \$24,036.

CHART 3

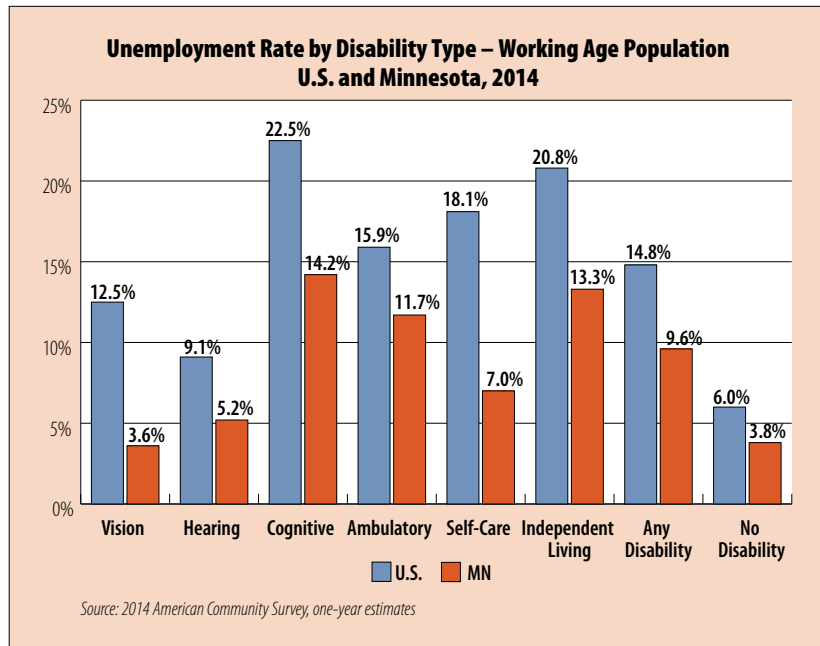


CHART 4

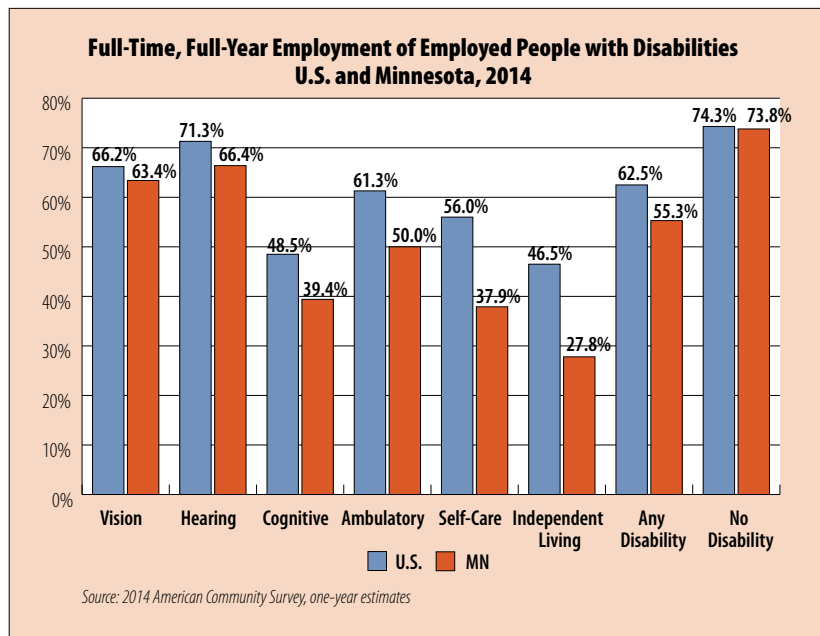


CHART 5

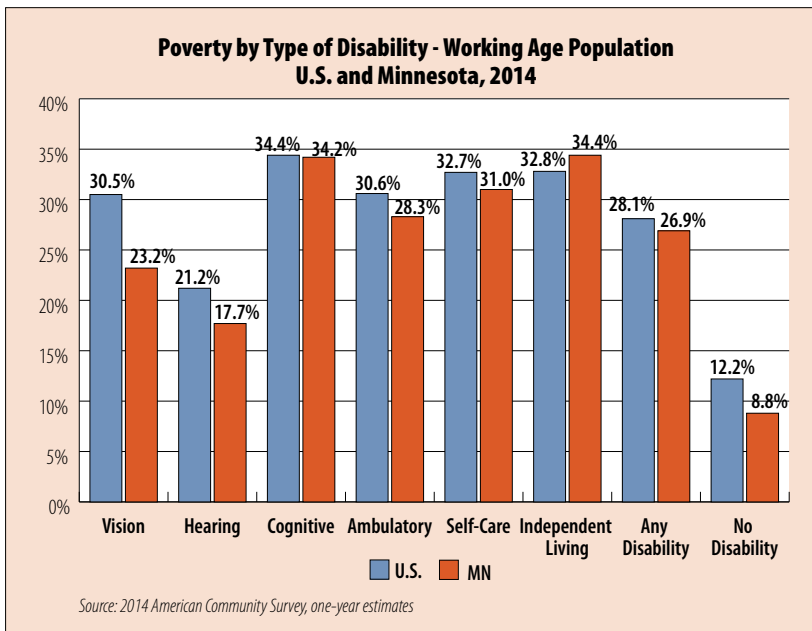


Chart 5 shows that 26.9 percent of the working-age population with disabilities in Minnesota was living below the poverty threshold in 2014, compared with 28.1 percent nationwide. These rates are more than double those for the working-age population without disabilities, which was 8.8 percent in Minnesota and 12.2 percent nationally in 2014.

Poverty rates vary by disability type. Hearing difficulty showed the lowest poverty rate at 17.7 percent in Minnesota and 21.2 percent nationally. Poverty among people with vision difficulty was 23.2 percent in Minnesota compared with 30.5 percent nationally. Among those with cognitive, ambulatory or

self-care disabilities, Minnesota had a slightly lower poverty rate than the nation. Minnesota had a higher rate of poverty, however, for those with independent-living difficulty, at 34.4 percent compared with 32.8 percent nationally.

Conclusion

This article has reviewed major labor force indicators for people with disabilities broken down by disability type and includes comparisons between Minnesota and the nation as of 2014.

Obviously, people with disabilities continue to face challenges in the labor market in both Minnesota and nationwide, and there are still

substantial gaps between the labor force characteristics among populations with and without disabilities in the nation and the state.

In addition, data confirm that disparities exist among the six types of disabilities identified in the ACS, with some groups of disabilities showing better or worse labor force metrics than others. The ACS data also indicate that cognitive disability, self-care disability and independent-living disability are the most disadvantaged groups among the six types of disabilities in the labor force metrics covered in this article.

In contrast, people with hearing, vision or ambulatory disability tend to experience better labor force outcomes. That may be due to a range of factors, including the relative affordability of accommodations needed for hearing, vision and ambulatory disabilities, lack of readiness or ability to participate in the labor force among the cognitive, self-care independent-living disabled groups, and/or the lack of awareness of employers about effective strategies to engage people with these disabilities within the workforce. **T**

Growing Demand for Caregivers

Home health aides and personal care aides will be two of the fastest-growing occupations in Minnesota in the next decade.

Every day millions of elderly, disabled and convalescing Americans rely on home health aides (HHA) and personal care aides (PCA) to assist them with the daily activities of living, either at home or in a care facility. As the population ages, demand for these workers will increase.

In 2015, 14.7 percent of Minnesota's population was 65 and older. The percentage of Minnesotans 65 and older is expected to increase to 21.3 percent by 2040, while the number of Minnesotans 85 and over is projected to almost double by 2040 from 1.32 million to 2.46 million, according to Minnesota State Demographic Center projections.

The 2014 U.S. Census Bureau American Community Survey estimates that 547,424 Minnesotans have a disability, with 31.6 percent of the 65 and over population having a disability.

These demographic trends point to the need for more home



health and personal care aides. The purpose of this article is to provide a snapshot of these two occupations.

Home Health Aides

Home health aides provide routine care such as changing bandages, dressing wounds and applying topical medications for the elderly, convalescents or people with disabilities at home or in a care facility. Home health aides monitor or report changes in health status and may also provide personal care such as bathing, dressing and grooming of patients.

Home health aide tasks may include the following (from O*NET OnLine):

- Change bed linens, wash and iron patient laundry, and clean patient quarters.
- Assist patients into and out of beds, automobiles or wheelchairs, to lavatories, and up and down stairs.
- Administer prescribed oral medication under written direction of a physician or as directed by home care nurse or aide.

- Massage patients and apply preparations and treatments, such as liniment or alcohol rubs and heat-lamp stimulation.
- Perform variety of miscellaneous duties as requested, such as obtaining household supplies and running errands.
- Entertain patients, read aloud, and play cards and other games with patients.
- Maintain records of services performed and of apparent conditions of patients.
- Purchase, prepare and serve food for patients and family members, following prescribed diets.

Home health aide is the 20th-largest occupation in Minnesota, with 27,550 people employed in the field. Employment projections for 2014 to 2024 show double-digit growth in the home health aide occupation in Minnesota, with a projected 9,254 openings from newly created jobs and another 6,940 openings from retirements and people leaving the profession, for a total of 16,190 projected openings over the 10-year period.

With a projected growth rate of 30.1 percent through 2024, the home health aide occupation ranks 22nd out of over 700

TABLE 1

Home Health Aide Employment and Wages by Region			
Region	2015 Employment	2016 Median Wage	Percent Change 2014 - 2024
Minnesota	27,550	\$11.99/hr.	30.1%
Seven County Mpls-St Paul, MN	14,990	\$12.69/hr.	30.7%
Central Minnesota	3,770	\$11.29/hr.	36.7%
Northeast Minnesota	2,320	\$12.01/hr.	28.5%
Southwest Minnesota	2,200	\$11.03/hr.	20.5%
Northwest Minnesota	1,540	\$11.89/hr.	25.0%
Southeast Minnesota	N/A	\$11.16/hr.	N/A

Source: Minnesota Occupational Employment Statistics 2015 with wages updated to 2016 first quarter; Minnesota Employment Outlook 2014 to 2024

TABLE 2

Home Health Aide Wages						
Region	Mean	10th	25th	Median	75th	90th
Minnesota	\$12.34/hr.	\$9.89/hr.	\$10.67/hr.	\$11.99/hr.	\$13.83/hr.	\$14.97/hr.
U.S.	\$11.11/hr.	\$8.48/hr.	\$9.32/hr.	\$10.64/hr.	\$12.08/hr.	\$14.54/hr.

Source: Minnesota Occupational Employment Statistics 2015 with wages updated to 2016 first quarter

occupations. This double-digit growth is projected across the state. The region with the highest projected growth is Central Minnesota at 36.7 percent over the 10-year period (see Table 1).

In the first quarter of 2016, Minnesota had 1,446 job vacancies for home health aides. While an abundance of opportunities exists, many vacancies were for part-time employment (906 of the 1,446 openings, or 63 percent, were for part-time work). Overall, there are many more opportunities for

people looking for part-time or supplemental employment, but fewer opportunities available for people looking for stable, full-time employment.

Home health aide wages, while low, are higher in Minnesota than nationwide (see Table 2). The entry level wage in Minnesota is \$10.67 per hour compared with \$9.32 nationally. Home health aides in Minnesota can expect to make more than the national average for the occupation at each comparison point.

Three Decades as a Home Health Aide

After working as an Army military police officer and at a grain elevator, Larry Boschee found a position with the state of Minnesota as a human services technician at the Cambridge State Hospital in Cambridge. With no experience, Boschee received intensive classroom and on-the-job training for working with developmentally disabled patients.

In the 1980s, Minnesota began transitioning patients out of the Cambridge State Hospital and into group homes. Facing a layoff, Boschee found a new job at DEED, where he continues to work today.

As a way to make some extra money for Christmas, Boschee began working as a home health aide part-time at a privately run group home for developmentally disabled adults who were unable to live independently. Having bonded with his patients and liking the extra money, Boschee kept working long after Christmas was over. For almost three decades, he has worked every Friday and every other weekend, helping to care for six adults and serving as a personal advocate for one resident.

In addition to the home health aide duties outlined above, as a personal advocate Boschee sets quarterly goals for his

patient, meets with health care professionals and the patient's family to discuss the goals and care plan, and ensures the patient is going on outings and taking vacations.

"The work is hard, the patients can be aggressive and the home can have high staff turnover," Boschee said. "However, I like the extra money, and I have been there a long time and have bonded with my patients. The patient I am a personal advocate for, I have worked with for 25 years. I have taken him to weddings, his parents' anniversary parties and both of their funerals. This patient calls me dad or papa."

When asked to reflect on his long part-time career and what would make it better, Boschee said, "The work is going to stay the same. There will be adult diapers to change, challenges in dealing with aggression or behavioral issues, and the work is physically demanding. But consistent raises and earned vacation time would help."

Personal Care Aide

Personal care aides assist the elderly, convalescents or persons with disabilities with daily living activities at the person's home or in a care facility. Duties may include keeping house (making beds, doing laundry, washing dishes) and preparing meals.



Larry Boschee

Personal care aides may provide assistance at nonresidential care facilities and advise families, the elderly, convalescents and persons with disabilities about such things as nutrition, cleanliness and household activities.

The following list of responsibilities is from O*NET OnLine.

- Advise and assist family members in planning nutritious meals, purchasing and preparing foods, and utilizing commodities from surplus food programs.
- Explain fundamental hygiene principles.
- Assist in training children.
- Give bedside care to incapacitated individuals and train family members to provide bedside care.

- Assign housekeeping duties according to children’s capabilities.
- Obtain information for clients, for personal and business purposes.
- Type correspondence and reports.
- Drive motor vehicle to transport clients to specified locations.
- Assist parents in establishing good study habits for children.
- Assist clients with dressing, undressing and toilet activities.
- Prepare and maintain records of assistance provided.
- Evaluate needs of individuals served and plans for continuing services.

Personal care aide is Minnesota’s second-largest occupation, with 65,740 workers. Employment projections for 2014 to 2024 show double-digit growth in the state. Employment is projected to grow from 63,988 in 2014 to 80,504 in 2024, for a projected 16,516 newly created openings. Combined with the 5,180 projected openings as a result of people retiring or leaving the profession, Minnesota employers will have 21,700 jobs to fill from 2014 to 2024. As with HHAs, projected growth is strongest in central Minnesota, but all

regions have double-digit growth projected through 2024.

With 3,388 job openings in spring 2016, personal care aide is the fourth most in-demand occupation in the state. Moreover, the projected growth rate of 25.8 percent through 2024 means that PCAs will likely continue to be in high demand well into the future (see Table 3). As with home health aides, however, over two-thirds of the personal care aide vacancies during second quarter 2016 were for part-time employment.

While low, personal care aide wages in Minnesota are higher than nationwide: The entry-level

wage in Minnesota is \$10.32 per hour compared with \$9.02 per hour nationally. At each percentile, a personal care aide can expect to make more than the national averages for the occupation (see Table 4).

Inconsistent Hours and Low Wages

Vermul Pewee is a senior at the University of Minnesota majoring in political science. During her sophomore year, Pewee applied to an agency that matches PCAs with clients. Both her mother and cousin have worked as PCAs, so Pewee knew the job paid well (\$11 an hour for part-time work) and would

TABLE 3

Personal Care Aide Employment and Wages by Region			
Region	2015 Employment	2016 Median Wage	Percent Change 2014 - 2024
Minnesota	65,740	\$11.26/hr.	25.8%
Seven County Mpls-St Paul, MN	40,480	\$11.32/hr.	25.2%
Central Minnesota	7,220	\$11.43/hr.	37.1%
Southwest Minnesota	4,630	\$11.67/hr.	23.2%
Northeast Minnesota	4,460	\$10.67/hr.	22.4%
Northwest Minnesota	3,940	\$10.98/hr.	24.1%
Southeast Minnesota	3,600	\$11.00/hr.	24.5%

Source: Minnesota Occupational Employment Statistics 2015 with wages updated to 2016 first quarter and Minnesota Employment Outlook 2014 to 2024

TABLE 4

Personal Care Aide Wages						
Region	Mean	10th	25th	Median	75th	90th
Minnesota	\$11.62/hr.	\$9.76/hr.	\$10.32/hr.	\$11.26/hr.	\$12.49/hr.	\$14.40/hr.
U.S.	\$10.58/hr.	\$8.21/hr.	\$9.02/hr.	\$10.19/hr.	\$11.63/hr.	\$13.90/hr.

Source: Minnesota Occupational Employment Statistics 2015 with wages updated to 2016 first quarter

be flexible around her school schedule.

She was soon matched with a 5-year-old autistic child. The mother worked weekends, which was a good fit with Pewee's school schedule. Her main tasks were to entertain and help the child with social norms and cues, play interactive games, and help the child use the bathroom or change his diaper. During the year that she worked as a PCA, Pewee received no formal training and at times had an erratic work schedule.

The inconsistent work schedule and the need to earn more money caused Pewee to leave her job as a PCA and begin working at a local hospital as a dietary aide. While the experience was invaluable in learning how to interact with a child with a disability, pursuing a career as a PCA was never an option for Pewee. Instead, the year she spent as a PCA helped her build a resume and made her a more competitive candidate for better-paying part-time jobs in the health care field.

A Challenging but Rewarding Experience

An Nguyen is a junior at the University of Minnesota pursuing a bachelor's degree in biology, society and environment. She works as a PCA for a client who uses a wheelchair. After spending several years working

in customer service, Nguyen was looking for a job that had spiritual value.

"I was seeking a job that would challenge me, a position where I could offer hands-on help, gain experience in working closely with people and learn to work with responsibility," she said.

"Being a PCA," she added, "I am required and expected to be able to communicate well with my client and assist him in completing daily tasks: bathing, dressing, going to the bathroom, brushing his teeth and transporting him in his wheelchair. I am also often asked to clean, prepare meals and drive my client using his van."

Initially, there were challenges, Nguyen said. "It certainly took me some time to get used to the nature of the job. Being a PCA requires the removal of some personal boundaries. You need to take care of your client as you would yourself. In the beginning, I was reluctant with certain tasks – bathing, dressing, etc. Fortunately, I have overcome these challenges."

Reflecting on her decision to become a PCA, Nguyen said it has been a rewarding experience and that she has gotten more out of it than she expected.

"This profession can be very suitable for college students, since it is a flexible job but also



Vermul Pewee

offers the opportunity to build crucial personal skills," she said.

Hiring Difficulty and Job Quality

Demand is strong in Minnesota for home health aides and personal care aides to work with the elderly and disabled. There are ample opportunities for part-time and second-paycheck employment in these occupations. Finding enough workers to fill these jobs, however, is becoming increasingly difficult. One factor is the poor quality of jobs: wages are low, full-time employment is hard to secure and access to employer-provided benefits is rare, according to the Paraprofessional Healthcare Institute. The tight labor market for these occupations will only get worse unless there are changes in the way these workers are compensated and scheduled. **T**

Educational Needs of the Workforce

Despite some claims that a postsecondary education is required for an increasing number of jobs, a DEED analysis found that nearly two-thirds of the jobs in Minnesota require a high school education or less.

There has been much debate in recent years about the educational needs of Minnesota's workforce. Some claim that educational requirements are increasing and that more people will need to attend college in coming years to meet the increasing demands of modern jobs.

This is the view, for example, of a study by Georgetown University's Center on

Education and the Workforce, which projected in 2013 that 74 percent of jobs in Minnesota would require some level of postsecondary education by 2020.

In contrast, persistent underemployment by many Minnesotans with postsecondary credentials has raised doubts about whether more people will need to earn a college degree.

New Educational Requirement Classification

One critical aspect of this debate is disagreement over what level of education is needed to work in each occupation. Not surprisingly, divergent measures of occupational requirements give rise to widely varying estimates of overall educational attainment demanded of the workforce. Currently, the most widely used classification of occupations by educational requirements is produced by the Bureau of Labor Statistics (BLS).¹ This is a national-level classification that attempts to identify, for each occupation, the "typical education needed for entry."

Do jobs in Minnesota require a different level of education than that suggested by the BLS system? In an attempt to address this question, we developed a new Minnesota-specific classification of educational requirements for each

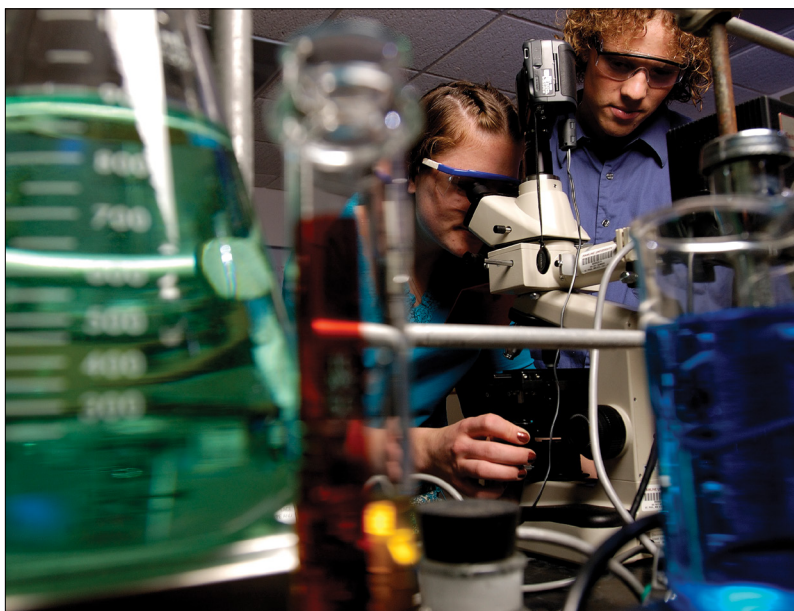


PHOTO: STEVE WOIT

occupation, as reported to us by Minnesota employers responding to DEED's biannual Job Vacancy Survey.

The survey asks, among other things, "what educational level is usually required" for the vacant position? The Minnesota-specific classification relied heavily on 31,701 responses to DEED's survey of employers, who reported 727,860 vacancies in the state across 787 occupations between the second quarter of 2011 and the fourth quarter of 2015.

Other sources of information included survey responses of incumbent workers by O*Net, graduation data by program, Minnesota Statutes and Rules, and current accreditation requirements for many professions.

For the purpose of the present analysis, we took a similar approach to BLS and identified a single educational level that is typically required for employment in an occupation. Unlike BLS, however, we did not explicitly focus on educational requirements for entry-level employment. We also attempted to identify the actual educational level needed to perform the duties of the job, rather than

educational "requirements" that are used mainly as screening mechanisms to reduce the number of applicants or raise their quality.

Because of this, we sometimes chose a lower level of education, even though in some cases a significant number of employers stated a higher level of education as the minimum for hiring.²

While it's most frequently very clear which educational level is "usually required" by employers, in a decent number of cases there is enough variability in the characteristics of individual jobs within an occupation that multiple educational levels are legitimately identified as required by employers. In these cases, we have still identified the single level most frequently being required, but we also identify multiple levels that are reasonable and required frequently enough to be deemed commonly occurring requirements.

We also took licensing and statutory requirements into account, which might in some cases mandate a higher level of education than is technically necessary to perform the job. In these cases we deferred to the experts within each occupation

on the minimum training required and took the current mandated minimum education.

For example, new pharmacists are now required to hold a Pharm.D. in order to be licensed in the state. Prior to 2002, however, pharmacists could be licensed with a bachelor's degree. Although many employers still list bachelor's degree as the minimum educational requirement, we selected doctoral degree as the typical level of education because of the current licensing requirements.

Finally, the "less than high school" classification of occupations was eliminated. Any occupation previously having that as its educational requirement is now classified along with high school occupations in the single category "high school or less."

Summary of Changes in Classification

Overall, a relatively small number of occupations required a change from their BLS entry level classification (see Table 1). Of the 820 occupations considered, 700 (85.4 percent) were found to require an educational level that coincides with their BLS classification.

¹See http://www.bls.gov/emp/ep_education_training_system.htm.

²A good example of this is registered nurses, for whom nearly half of the job openings ask for a bachelor's degree. The minimum skill level for most nursing jobs, however, can be obtained through an associate degree.



Of the 120 occupations that differ from BLS, 55 have classification levels lower than BLS and 24 are higher. The remaining 41 occupations are “all other” categories that contain jobs that are too disparate to assign a single classification. While BLS provides a single educational level for these catch-all categories, we designate them as N/A.³ These 120 occupations make up 13 percent of workers employed in Minnesota. This indicates that the BLS educational classification is accurate for the vast majority of occupations in Minnesota, but significant improvements will come from this new classification.

Table 2 shows the occupations with the most employment that changed with the new classification. Topping the list is registered nurses, which were classified by BLS as typically

requiring a bachelor’s degree for entering the field. Nurses, however, can obtain an associate degree and compete for many of the same jobs as those with a bachelor’s degree.

The other top occupations that changed were bookkeeping, accounting and auditing clerks, heavy and tractor-trailer truck drivers, and teacher assistants. These had all been classified by BLS as requiring vocational

education, but other sources of evidence strongly indicated that only a high school diploma or less is typically required for these jobs.

Another notable occupation is police and sheriff’s patrol officers, which typically requires only high school education nationally. In Minnesota, however, those jobs, by law, require an associate degree.

Educational Requirements of Minnesota’s Workforce

With this new classification of educational requirements for occupations, we can compare the number of jobs in the state that fall into each educational category, using both the new and original BLS classifications (see Table 3).

Overall 64.4 percent of jobs in Minnesota are in occupations requiring high school or less.

TABLE 1

Number of Occupations with Educational Requirements that Changed				
Change in Requirement	Number of Occupations	Percent of Occupations	Total Employment in MN	Percent of Employment in MN
No Change	700	85.4%	2,303,940	87.3%
Decrease	55	6.7%	243,720	9.2%
Increase	24	2.9%	90,380	3.4%
N/A	41	5.0%	102,360	3.9%
Total	820	95.0%	2,638,040	100.0%

Source: Last two columns from Minnesota Occupational Employment Statistics, Q2 2015

TABLE 2

Top Occupations with Changed Requirements, by Employment Level				
Occupation	Original Requirement	New Requirement	Decrease/Increase	Employment
Registered Nurses	Bachelor's Degree	Associate Degree	Decrease	59,640
Bookkeeping, Accounting and Auditing Clerks	Vocational Training	High School or Less	Decrease	34,770
Heavy and Tractor-Trailer Truck Drivers	Vocational Training	High School or Less	Decrease	34,550
Teacher Assistants	Vocational Training	High School or Less	Decrease	31,880
Business Operations Specialists, All Other	Bachelor's Degree	N/A	N/A	27,790
Sales Representatives, Services, All Other	High School or Less	N/A	N/A	19,440
Computer User Support Specialists	Vocational Training	Associate Degree	Increase	14,140
Machinists	High School or Less	Vocational Training	Increase	11,730
Electricians	High School or Less	Vocational Training	Increase	11,240
Police and Sheriff's Patrol Officers	High School or Less	Associate Degree	Increase	8,790
Medical Assistants	Vocational Training	High School or Less	Decrease	8,730

Source: Last column from Minnesota Occupational Employment Statistics, Q2 2015

TABLE 3

Educational Requirements and Attainment of the Minnesota Workforce				
Educational Requirement of Occupation	Total Employment in MN (new classification)	Percent of Jobs in MN (new classification)	Percent of Jobs in MN (BLS classification)	Percent Attainment ¹
High School or Less	1,763,640	64.4%	61.8%	54.4%
Vocational Training	135,880	5.0%	8.9%	-
Associate Degree	132,140	4.8%	2.5%	11.6%
Bachelor's Degree	511,590	18.7%	22.8%	23.2%
Graduate Degree	94,790	3.5%	4.0%	10.8%
N/A	102,360	3.7%	-	-
Total	2,740,400	100.0%	100%	100%

¹The percent attainment comes from the ACS, which does not ask about vocational education. In this column, anyone who has not completed at least an associate degree is counted as having high school or less.

Source: Minnesota Occupational Employment Statistics, Q2 2015, American Community Survey, average 2011-2014

³Certain "all other" categories were assigned an educational level when it was clear that all occupations within the SOC code shared an educational requirement, e.g., SOC 29-1069 "Physician and Surgeons, all other."

TABLE 4

Educational Attainment of Workers, by Educational Requirement of the Occupation					
Educational Requirement	Educational Attainment				
	Less than Associate Degree	Associate Degree	Bachelor's Degree	Graduate Degree	Total
High School or Less	70.9%	10.4%	15.8%	2.9%	100.0%
Vocational Training	69.6%	22.2%	6.7%	1.4%	100.0%
Associate Degree	16.8%	36.9%	39.3%	7.0%	100.0%
Bachelor's Degree	19.6%	8.6%	47.1%	24.8%	100.0%
Graduate Degree	6.1%	2.8%	19.5%	71.6%	100.0%
N/A	37.7%	12.3%	35.9%	14.1%	100.0%
Total	54.4%	11.6%	23.2%	10.8%	100.0%

Source: American Community Survey, average 2011-2014

This is slightly higher than the 61.8 percent share based on the BLS classification. By differing levels of postsecondary education by occupational employment, the share in occupations requiring vocational education was 5 percent (8.9 percent by the BLS classification), associate degree was 4.8 percent (2.5 percent), bachelor's degree was 18.7 percent (22.8 percent), and the share in graduate degree occupations was 3.5 percent (4 percent).

Thus, generally speaking, our reclassification of occupations shifted employment toward occupations requiring high school and associate degrees and away from the other educational levels. Despite the broader

“usually required” definition used here compared with the “typical entry level” definition used by BLS, our reclassification slightly lowers the overall educational level required of our current occupational employment mix.

Table 3 also gives the percent of workers in the Minnesota labor force with each level of education. It is clear that the education levels of the workforce exceed the levels required in the state, with more than double the workers holding an associate degree than jobs that require that degree. Meanwhile, 34 percent hold a bachelor's degree or higher, while only 22 percent of jobs require this level of education. These trends will only become more pronounced as

the baby boomers retire and are replaced in the workforce with a generation that is on average much more highly educated.

Over-education

As the previous section showed, there is significant misalignment between the educational needs of employers and the educational attainment of the workforce. The direction of the misalignment, however, is primarily toward over-education.

This in itself is not a bad thing, but the problem arises when over-education leads to mal-employment, where graduates from postsecondary programs are unable to find work in their fields and thus take jobs requiring lower levels of skill. This leads to inefficient investments in education from students who are expecting to improve their job prospects and wages upon graduation. In this section we look in more detail at the misalignment of educational requirements and attainment.

Table 4 presents the percentage of jobs in occupations with each educational requirement and compares them with the educational attainment of workers employed in those occupations.⁴

⁴Certain “all other” categories were assigned an educational level when it was clear that all occupations within the SOC code shared an educational requirement, e.g., SOC 29-1069 “Physician and Surgeons, all other.”

⁵Educational attainment of workers comes from the American Community Survey. This survey does not capture vocational training, so all workers who had attained less than an associate degree were grouped together.

Table 5 summarizes this information by presenting the percentage of workers in occupations with each educational requirement that have more or less education than is typically required. Overall, 63 percent of workers are employed in occupations that are matched with their education level, while 8 percent have a lower education than is typically required for their occupation, and 27 percent have a higher level of education than necessary.⁵

Over-education is prevalent in all types of occupations, but particularly in jobs with a minimum requirement of an associate degree (largely due to registered nurses). Many jobs requiring only vocational training were filled by those with associate degrees, which may largely reflect the vocational nature of many associate degree programs.

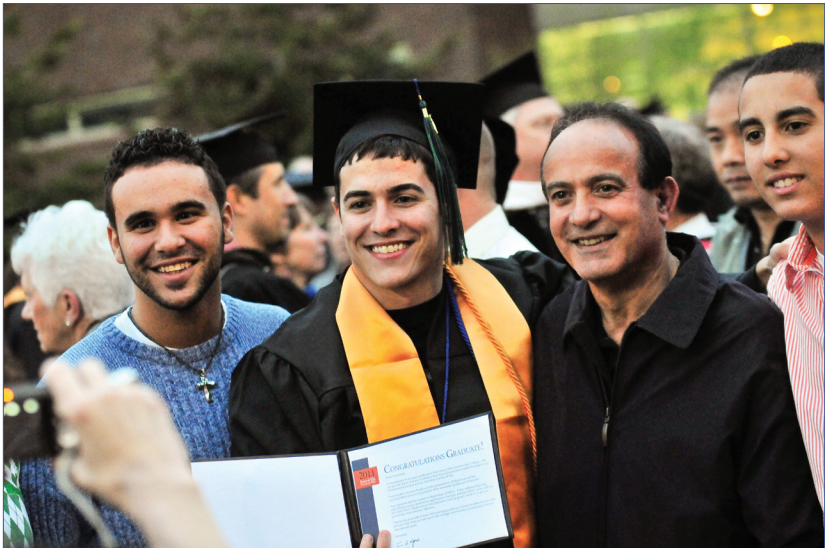
A significant number of jobs requiring high school education or less were filled by people with a bachelor's degree. It is likely that many of these are examples of mal-employment, given the high costs of obtaining a bachelor's degree, although it is impossible to say with certainty how many.

There are also a significant number of people employed in

TABLE 5

Percent of Workers with Educational Attainment Above or Below the Typical Requirement for their Occupation			
Typical Educational Requirement	Percent Equal	Percent Above	Percent Below
High School or Less	71%	29%	0
Vocational Training	70%	30%	0
Associate Degree	37%	46%	17%
Bachelor's Degree	47%	25%	28%
Graduate Degree	72%	0	28%
Total	63%	27%	8%

Source: Source: American Community Survey, average 2011-2014



occupations typically requiring a bachelor's degree who do not have any postsecondary education. These are largely concentrated in management and computer occupations, where experience can often substitute for formal credentials.

Conclusion and Next Steps

Given the significant investment, both publicly and individually, that postsecondary education requires, an accurate calibration of the educational attainment required of our workforce by



our economy's occupational mix is extremely important. But the very large differences in various estimates of this required attainment have confused rather than clarified the issue.

We have shed light on this by using a very large set of responses from Minnesota businesses about their specific educational requirements. What this reveals is that there does not seem to be an overall shortage of properly educated workers in Minnesota. If anything, there are not enough highly skilled jobs to go around for those with postsecondary education.

But it is important that we understand what these findings do and do not tell us. They do not say that postsecondary education, or even achieving a

higher educational attainment than this classification suggests, isn't valuable. Within many occupations, there exist individual jobs that may indeed require higher educational attainment than is "usually required" (and conversely some that may require less education than is typical). Even when the job does not require it, employers will often look more favorably on candidates with more education. And having more education than your particular job requires does not necessarily mean you'll find that job unfulfilling. Perhaps most importantly, while attaining a postsecondary degree may not guarantee a job commensurate with that degree, not pursuing postsecondary education all but ensures lack of access to more lucrative jobs.

These results also do not preclude a shortage of properly educated individuals in certain locations or within certain occupational fields. A major expansion in a smaller city or a rapid shift toward a particular type of occupation may indeed create a genuine lack of qualified candidates, but these are problems more readily solved through enhanced worker mobility or retraining than through an absolute increase in the educational attainment of our workforce.

The findings in this article are one part of our effort to better align labor supply and demand in the state by providing accurate and accessible information about labor market prospects by occupation. One new data tool currently under development will take information on new graduates from postsecondary institutions, by field of major, and link it with projected job openings in the state by education level. This will allow prospective students and career counselors to better identify which occupations have too few workers entering them, and which college majors are graduating people who are unable to find work in their field of study. **T**

Connect 700: New Hope for Minnesotans with Disabilities

The program goal is to increase the share of people with disabilities in the state government workforce.

In celebration of National Disabilities Employment Awareness Month, Gov. Mark Dayton announced the launch of a new program in October called Connect 700. This program is intended to boost the number of people with disabilities in the state government workforce. The new program connects job seekers with disabilities to employment opportunities in state government without requiring them to go through the traditional competitive hiring process.

Job seekers with disabilities can be hired through on-the-job training. They will have an opportunity to demonstrate their skills and abilities for a position for up to 700 hours before a hiring decision is made. The program marks the state's first affirmative action-based employment policy for people with disabilities in many years. The goal is to make state government a role model for employers in Minnesota and the nation in promoting disability employment.

Background

The percentage of people with disabilities employed in state government in Minnesota declined from 10.1 percent in 1999 to 3.9 percent in 2014. Connect 700 was originally established in 1981 to provide people with disabilities reasonable accommodations for the civil service exam. The program was revamped after Gov. Dayton signed Executive Order 14-14, which called on state agencies to reach a goal of a workforce comprised of 7 percent people with disabilities across all state government job categories.

The Program

To participate in Connect 700, an individual must:

- Have a disability, as defined by the Americans with Disabilities Act (ADA), that significantly impacts the individual's ability to participate in the typical selection process.

- Meet the minimum qualifications in the job posting.

- Possess a Proof of Eligibility Certificate.

Types of disabilities included are blindness, deafness, autism, learning disabilities or disabilities requiring the use of a wheelchair or other personal mobile device. Other disabilities also may qualify as long as the treating provider or vocational rehabilitation counselor indicates that the disability will have a significant or negative impact on the applicant's ability to compete in the typical selection process.

Anyone with a disability who wants to participate in the program can find the application and details about the hiring process on the Minnesota Careers website at www.mn.gov/careers/ under the "Diverse Workforce" and "People with Disabilities" tabs. Once the application is completed by the applicant and treating provider or vocational rehabilitation counselor, it is then forwarded

to the Office of Inclusion and Diversity at Minnesota Management & Budget. For those eligible, a Proof of Eligibility Certificate is provided.



State agencies are required to indicate on job postings whether a vacancy is eligible for Connect 700. Generally, all permanent positions are eligible.

If hired, Connect 700 candidates will be placed in a pre-probationary trial period of 700 hours, or approximately four and a half months. This is an opportunity to receive on-the-job training and further demonstrate skills and abilities for each position. A hiring manager can move someone who successfully demonstrates qualifications for a job into the probationary period at any time before the 700 hours are completed.

The hiring manager is responsible for providing training, ongoing feedback and any needed reasonable accommodations. If a candidate is unsuccessful, a hiring manager must explain why the person was unsuccessful and what steps the manager took to assist the candidate in the job.

Goals and Benefits

While the state's overarching goal is to increase the share of people with disabilities in the workforce, the program has other benefits as well. The state is facing heavy competition for talent due to slowing labor force growth. By 2024, projections show Minnesota will be 95,000 workers short of filling available jobs. The disability workforce is an untapped pool of talent. About 1 in 5 people have disabilities, but as many as 72 percent of these individuals are unemployed and want to work, according to the U.S. Census Bureau's American Community Survey.

Moreover, Connect 700 is a tool for hiring managers to help increase diversity in state government. Countless studies demonstrate that a diverse workforce delivers better products and services that more effectively meet the needs of customers or constituents. Who better to understand and

meet the needs of the state's population with disabilities than employees with disabilities?

Conclusion

Connect 700 is an affirmative action-based policy aimed at increasing the participation of people with disabilities in the state of Minnesota's workforce. It sets clear guidance, goals and timelines for implementation, making it more likely to succeed than previous anti-discrimination-based policies.

Just two months after the launch of the program, more than 40 people have been certified as eligible for Connect 700. One agency has hired an employee through the program.

Time will tell if this program succeeds in increasing the hiring of people with disabilities. In the meantime, Connect 700 provides state agencies with the opportunity to reach talent within the disability community. The hope is that Connect 700 will not only make Minnesota a leader in hiring people with disabilities but also in serving people with disabilities. **T**

Meet

THE WRITERS



MOHAMED MOURSSI-ALFASH

Mourssi-Alfash is a labor market research analyst, coordinator of the state's Job Vacancy Survey, and disability employment expert at DEED. He has a bachelor's degree in business/accounting from Alazhar University in Cairo, master's degree in cost accounting from University of Alexandria, Egypt, MBA from Globe University, master of public affairs from Humphrey School of Public Affairs, University of Minnesota, and Ph.D. in organizational development from Capella University.



ORIANE CASALE

Casale is assistant director of the Labor Market Information Office at DEED. She has a bachelor's degree from the New School University in New York City and a master's degree in public affairs from the University of Minnesota in Minneapolis.

MATTHEW BOMBYK

Bombyk is a research analyst specialist senior at DEED. He has a master's degree in applied economics from the University of Minnesota-Twin Cities and a bachelor's degree in economics and biology from the University of Minnesota-Morris. His research at DEED concentrates on measuring the alignment between postsecondary fields of study and occupational demands of employers. Before joining DEED, he spent nearly three years in Mongolia studying the impact of social programs there.



ANNE FEAMAN

Feaman is the director of the Office of Diversity and Equal Opportunity at DEED. She holds a law degree (J.D.) from the Hamline University School of Law in St. Paul. Prior to joining DEED, she was the statewide equal opportunity director at Minnesota Management and Budget and the chief investigator at the Department of Human Services. Feaman also served 10 years of active duty in the U.S. Air Force.



CHLOE CAMPBELL

Campbell is a research analyst at DEED. She holds a bachelor's degree in history from Southern Oregon University in Ashland and a master's degree in community and regional planning from the University of Oregon in Eugene.



STEVE HINE

Hine is the director of the Labor Market Information Office at DEED. He has a master's degree and Ph.D. in economics from Washington State University in Pullman and a bachelor's degree from Bemidji State University.

MINNESOTA ECONOMIC TRENDS

MINNESOTA ECONOMIC TRENDS is published by the Labor Market Information (LMI) Office of the Minnesota Department of Employment and Economic Development (DEED).

©2016 by the Minnesota Department of Employment and Economic Development, Labor Market Information Office.

An equal opportunity employer and service provider. Upon request, MINNESOTA ECONOMIC TRENDS can be made available in alternative formats for people with disabilities by calling 651-259-7406

DEED COMMISSIONER **Shawntera Hardy**; LABOR MARKET INFORMATION DIRECTOR **Steve Hine**; ASSISTANT DIRECTOR AND CONTENT MANAGER **Oriane Casale**; EDITOR **Monte Hanson**; GRAPHICS/LAYOUT AND WEBPAGE PREPARATION **Mary Moe**; DISTRIBUTION **Debbie Morrison**.

MINNESOTA ECONOMIC
TRENDS

mn EMPLOYMENT AND
ECONOMIC DEVELOPMENT

LABOR MARKET INFORMATION

1st National Bank Building
332 Minnesota Street, Suite E200
St. Paul, MN 55101-1351

LMI HELPLINE: 651-259-7384

LMI RECEPTIONIST: 651-259-7400 • 1-888-234-1114

LMI FAX: 651-282-5429

LMI E-MAIL: DEED.lmi@state.mn.us

WEB SITE: <http://mn.gov/deed/lmi>

PRST STD
U.S. POSTAGE
PAID
LMMAIL