Training People for the Jobs of Today and Tomorrow

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About a year and a half ago, I wrote an article previewing the launch of WAM, the workforce asset map (http://www.uccseconomicforum.com/publications/BTN-from-CSBJ-Mar-17-wfa.pdf). This web-based platform is a "one stop," free, online tool that helps jobs seekers, employers and students identify and easily access workforce-related resources within Colorado Springs (https://wam.uccs.edu/). This new, region-specific resource only happened because a group of workforce-related organizations took the time to meet and brainstorm about how we can address the chronic workforce shortage and skills gap that affects just about every city in America.

About a year ago, the website launched, and many good things have happened since. A broader group of workforce-related organizations now make up WAT, or the workforce action team. Business representatives are more heavily represented in WAT as well as more school districts. This is in addition to the original WAM group, which included The Chamber and EDC, Pikes Peak Community College, Pikes Peak Workforce Center (PPWFC), Catalyst Campus, UCCS, and others. The current group has rallied around our community WAM tool, and they are working together to use it as a springboard and tool for many workforce-related initiatives around the city. PPWFC has made a WAM video to show at various places including high school assemblies since one of the goals of the website is to help inform current and future workers about the high demand jobs in our region, state and nation. For regional data, WAM is updated on a quarterly basis with current job openings by occupational group, number of openings, starting and mid-career wages, and credential requirements. Projections for job openings are also included so students can make informed decisions about their future career paths.

Why go through all this trouble, and why does an economist care? Because at the epicenter of economic growth is business growth, but businesses cannot grow without qualified labor. Having more people gainfully employed has additional benefits such as raising the standard of living, boosting the purchasing power of the average consumer (and domestic consumption is 2/3 of the U.S. economy), increasing the tax base, and reducing transfer payments like Medicaid. It's a win all around.

The challenge is that developed economies like ours have had logarithmic changes in technology especially during the past 30 years. This has fundamentally changed the nature of jobs and therefore, the training necessary for those jobs. Concomitantly, the nation moved away from career track programs at high schools while emphasizing that university-level education is a baseline requirement for the jobs in our increasingly high-skilled economy. The problem is that the definition and specifics of many of those "high-skill" jobs remains elusive to the future workforce. I certainly do not remember having any real-time information or projections on high-demand jobs, and apparently, many high schoolers report the same today. We still have generic and somewhat vague career categories such as law, communications, and marketing. These are all great fields of study and there certainly is much to be said for liberal arts degrees in general. The problem many graduates face, however, is the lack of specificity these degrees provide in a world that is increasingly specialized. Hence, we have a double-edged sword where today's high schoolers and college attendees do not have enough real-time information about the high-demand occupations, while educational systems are struggling to keep up with the rapid technological changes

inherent in our high-tech world. For the middle-skill occupations, we are seeing a resurgence of technical training such as construction and manufacturing programs in high schools and community colleges, but again we find the supply of workers is short of demand.

Part of the original mandate of the workforce asset map team was to study and hopefully help address the chasm between labor supply (graduates of specific education/training programs) and labor demand (number of job postings by occupational group). This "audit" as I call it, was completed this fall for the most highly demanded health care positions in Colorado Springs, and the hope is to repeat the exercise for the top information technology (IT) positions during 2019. As Table 1 shows, the most recent job openings are concentrated in these two fields. This has been the case for the four years my office has been tracking the information, and these shortages will only be magnified by the aging of the U.S. population.

The next part of the audit is to compare these job openings over the course of a year to the number of graduates from the relevant higher education institutions in Colorado Springs. For example, in 2017, there were a total of 5,394

> ### *Table 1. Colorado Springs MSA Job Openings December 2018*
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> Average daily job openings: 13,426
>
> Average posting duration: 34 days
>
> Median salary of posted jobs: $80,025
>
> Colorado median salary: $74,325
>
> #### *Top Job Titles*
>
> *Registered Nurse (1,617 jobs)*
>
> Customer Service Rep (931 jobs)
>
> Software Engineer (891 jobs)
>
> Systems Engineer (833 jobs)
>
> *Medical Assistant (778 jobs)*
>
> Systems Administrator (759 jobs)
>
> *Certified Nursing Assistant (695 jobs)*
>
> Administrative Assistant (691 jobs)
>
> Sales Rep (594 jobs)
>
> Sales Associate (580 jobs)
>
> Source: Talent Neuron

open registered nursing positions and a subset of those, 1,615, were "entry level." We tracked the number that were entry level with the supposition that these positions would more likely be open to recent graduates. We then tallied up the number of local, registered nurse (RN) graduates: in 2017, our community produced 190 RN graduates (see Table 2). That leaves an unmet need of 5,204 RN positions that could have been filled by local graduates if a) we had more youth or newly trained people enter into that field of study, and b) we had more training slots available at local higher education institutions. If we assume new graduates can only fill the entry-level positions, there would still be an unmet need of 1,425 RN positions.

The average salary across the U.S. for an RN is $70,000, and the "additional resources" tab for students within the WAM website will show a student that information from the Bureau of Labor Statistics (BLS) Occupational Handbook. The BLS handbook has that information for all occupations, and I have printed and pasted onto my refrigerator the specific page with the fastest growing occupations so my kids can make informed decisions. It wasn't as well received as I would have liked, but you get the idea.

The table also shows the results of the audit for four other high-demand health care occupations. The chasm between demand and supply is truly disconcerting, but it is not easy to snap our fingers and create more training programs in today's high-cost, post-secondary education system. Health care is particularly challenged because many training programs have clinical rotations at health care facilities, which are

Table 2. Audit of Supply and Demand for Health Care Positions Colorado Springs MSA, 2017				
Job Category	**Job Postings Entry/Junior Level (0-2 years)**	**Job Postings Total All Levels**	**Labor Supply (Number of Local Graduates)***	**Total Unmet Need (Demand-Supply)**
Registered Nurse (#1)	1,615	5,394	190	**5,204**
Medical Assistant (#5)	259	1,063	214	**849**
Nursing Assistant (#7)	486	1,463	95	**1,368**
LPN (Licensed Practical Nurse) (#25)	238	480	3	**480**
Phlebotomist (#26)	53	134	18	**116**

*Graduates are from PPCC, UCCS, Pima Medical Institute, National American University, IntelliTec for calendar year 2017.
Note: Job postings for all of 2017, and rankings are for December of 2018. The rankings have stayed relatively steady for the past four years according to Talent Neuron.

logistically difficult and represent an added cost. In other words, there is not a quick fix. Yet, having this information specific to our community also presents opportunity. As simple as this audit might seem, our community is ahead of the curve in terms of aggregating this data and making it available to our kids and the general public. Traci Marques, director of the Pikes Peak Workforce Center, and myself are on a mission to get WAM out to high schools via the newly created video. My office is also working with a teacher in District 11 who is using WAM in her newly created social marketing class as the "product" they disseminate and amplify in the social media universe. Early feedback from K-12, PPCC and our local universities is that young people love the tool. Now we just need to make sure they know about it. We are also partnering with The Quad, the organization that is a collaboration between PPCC, UCCS, Colorado College and the Air Force Academy, to ensure that our higher education leaders have real-time data on the high demand occupations in our region.

Any community that pays attention to these current and future workforce trends and collaborates to ameliorate the skills gap and workforce shortages will undoubtedly have an advantage in today's competitive national and global arenas. I maintain that one of our region's greatest advantages is the "small town" feel where people can pick up the phone, ask a community leader to participate in a collaborative effort, and then execute on new, common sense ideas. It's how bigger problems can be broken down into digestible pieces, and how tangible results can be found.

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For information on receiving the monthly economic dashboard via sponsorship, please contact Tatiana Bailey, Director, UCCS Economic Forum (tbailey6@uccs.edu)