

THROUGHOUT THE YEARS, EDUCATION PROGRAMS HAVE COME AND

gone. However, the hands-on approach embedded in most career and technical education (CTE) programs has gained prominence as college debt soars and college grads look for related jobs. One crucial aspect of CTE that is sure to stick is the concept of work-based learning (WBL). Henry and I (the authors) contend that one of the oldest and most successful forms of WBL is rooted in the apprenticeship model. Many of the forefathers of this great nation served as apprentices. Benjamin Franklin was a printer's apprentice, while Paul Revere completed a silversmith apprenticeship. Times have changed and so have registered apprenticeship programs (RAP), which are overseen by the U.S. Department of Labor's Office of Apprenticeship.

The current administration in Washington, D.C., has bent over backwards for more than two years to promote apprenticeship as an alternative pathway to college. Lawmakers took a giant leap in September 2015 by awarding nearly \$175 million in grants to over 40 programs around the United States. Moreover, the Dept. of Labor has proposed another \$90 million of federal grant funds be awarded in 2016 to keep the momentum going. The goal is to grow apprenticeship programs by doubling the current number of apprentices to 800,000 by 2019.

To this end, CTE professionals need to consider how they might play a part in this process. Far too often, many in this country have viewed apprenticeship solely for construction, and/or it has been relegated to postsecondary education. In order to achieve this lofty goal, one must

consider expanding RAPs horizontally into other economic sectors, as well as vertically into the secondary level.

With this in mind, we have interviewed two experts who were instrumental in creating innovative RAPs, which are now deemed national role models. We wish to thank Brad Neese, associate vice president with the South Carolina Technical College System (Apprenticeship Carolina in South Carolina), and Walter Siegenthaler, executive vice president at Max Daetwyler Corporation (a member of Apprenticeship 2000 in North Carolina).

The following interview will allow you to see how an intermediary approaches RAP versus how a firm within a consortium views RAP.

Authors: Please describe your organization and why it adopted the apprenticeship model. Has the Dept. of Labor's re-

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cent efforts to cast a wider net to include more non-traditional industries positively impacted your organization's strategy? If so, how?

Brad: Apprenticeship Carolina does not have apprentices; it is an intermediary and an extension of the technical college system in South Carolina. There are 16 technical colleges working with Apprenticeship Carolina. Apprenticeship Carolina helps firms better understand what apprenticeship is, and it connects business to education by developing a pipeline of talent.

Apprenticeship Carolina was created in 2008. At that time, South Carolina had only 90 firms utilizing RAP. Now it has 773. The Dept. of Labor's efforts have allowed for Apprenticeship Carolina to grow. We started Apprenticeship Carolina in the middle of the recession; therefore, we took a multi-sector approach. This included health care, advanced manufacturing, trades, IT and hospitality. By going after non-traditional sectors (all but the trades), the apprentices ended up coming from non-traditional populations. This was an unexpected consequence that has helped our community immensely.

Walter: Max Daetwyler Corporation manufactures custom-designed equipment. Since it is involved with custom design, this equates to low quantity of parts, which then requires highly skilled laborers. After searching for such workers, Daetwyler decided to grow its own. In 1996, five manufacturing firms decided to create Apprenticeship 2000. Each has its own RAP, but all partner together in order to leverage their numbers to ensure the volume the local community college requires to schedule courses one day per week. This partnership allows for custom-designed curriculum.

The Dept. of Labor's efforts to include other sectors of the economy have not yet impacted our partnership—finding quality students still remains a tough job. However, in the future as more people become familiar with apprenticeship, it should assist us in recruiting.

Authors: January 12, 2016, was President Obama's final State of the Union address. In his last two speeches he promoted apprenticeship programs as a viable pathway to postsecondary education.

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How long has your organization been involved with a RAP?

Brad: In 2003, the state chamber of commerce published the *Hayes Report*.¹ One of the report's recommendations was to develop apprenticeships. The technical colleges stepped up and took the lead in developing RAPs. The South Carolina legislature passed a law that would provide businesses a \$1,000 tax credit per apprentice

Walter: In 1995, Daetwyler implemented its first U.S. apprenticeship program. I went through a machinist's apprenticeship in Switzerland in 1965-69. Today, Daetwyler has 40 apprentices in its Swiss operation and seven in its U.S. program (out of 90 total U.S. employees). Imagine where we would be in the United States today if all companies had 8 percent of their workforce serving in a RAP.

Authors: Hardly a day goes by where we don't hear something in the media about impending workforce shortages. Why is your organization involved with a RAP versus creating an in-house (non-accredited) apprenticeship?

Brad: There is value in helping people earn portable industry-recognized credentials from the Dept. of Labor. In fact, South Carolina's legislature only provides the aforementioned tax credit to businesses utilizing RAPs.

Walter: Apprenticeship is the right way to go. Firms need to look beyond what is merely just good for them and consider the impact on the community. Journeyworker status signifies recognition as a professional and offers portability. On the flip side, if the government becomes too involved with day-to-day issues on the shop floor, this could backfire and be cause for program de-registration.

Authors: Since the launch of Harvard's *Pathways to Prosperity* report in February 2011, both Swiss and German styles of apprenticeship have been consistently cited as world-class systems. What apprenticeship model(s) did your organization follow and why?

Brad: For years, South Carolina has had a number of German and Swiss firms operating within its borders. Initially, Roche, a Swiss firm, played a big part in influencing South Carolina's RAP model. Over the years, Apprenticeship Carolina representatives have visited Switzerland and Germany to study these apprenticeship systems up close. These trips have produced strong ties back to Germany. In fact, apprentices in Apprenticeship Carolina's MTU² RAP earn a Dept. of Labor certificate and their German equivalents. In keeping with these models, 97 firms in South Carolina are now working with high school-age apprentices/students.

Walter: As mentioned earlier, in 1995, executives at Daetwyler knew that apprenticeship worked in a number of European cultures. Therefore, it considered best practices from the systems in Germany, Switzerland and Austria in the design of its program one year prior to the launch of Apprenticeship 2000, including working with high school students.

Authors: In many countries across the globe, more often than not, CTE is considered a "second cousin" to academic education. Nonetheless, the "earn-while-you-learn" aspects of a RAP at the secondary level serve as a game-changer. To this end, when it comes to RAP, how does your organization measure success?

Brad: Apprenticeship Carolina looks at average costs, as well as the number of firms with RAPs today versus five years

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One of the smaller partners in Apprenticeship 2000 is Ameritech. It has approximately 30 employees. Nearly one-third of those employees are graduates of RAP. The owner swears that the company would not exist without access to RAP.

ago. South Carolina has served over 14,000 apprentices to date.

Walter: Daetwyler measures success by how its graduates behave and perform. Apprenticeship 2000 indentures 10–15 apprentices per year. Since 1996, fewer than 30 percent of those apprentices dropped out of the program. One of the smaller partners in Apprenticeship 2000 is Ameritech. It has approximately 30 employees. Nearly one-third of those employees are graduates of RAP. The owner swears that the company would not exist without access to RAP.

Authors: In today's competitive global marketplace, firms are constantly seeking means to cut costs and improve profits. Has your organization been able to collect enough data from its RAPs to calculate

return on investment? If so, please share this info with us.

Brad: No, not to date. But Apprenticeship Carolina recently received a federal grant that will be used to produce a major study to help us determine ROI.

Walter: Daetwyler has not calculated the ROI. Those in charge are convinced that in order to stay in business it needs to be involved with RAP. One needs to consider what the cost would be not to be involved.

Authors: In today's fast-paced economy, where change seems to be the only constant, partnerships are important to survival. Briefly cite the roles your stakeholders play (e.g., management, labor, government, school, apprentices, etc.) in making your program a national role model.

Brad: The technical colleges not only

supply training, but also more importantly serve as a conduit to businesses. Over the years, Apprenticeship Carolina has built a trusting relationship with the Dept. of Labor. This partnership reduces the bureaucratic mess of registering new programs. The chamber of commerce provides both business and political support to Apprenticeship Carolina's efforts. And the state chamber of commerce works closely with the Dept. of Economic Development. The K–12 system helps match employers with the students.

Walter: Partners must trust one another, and they need to create a common vision. In the Apprenticeship 2000 model, the community college is a key player as instructors deliver the required curriculum when, where and how the employers need it. The government as a partner is a delicate matter. It provides the industry-recognized credential, but at the same time should not get too deeply involved with day-to-day matters within the firms.

Authors: Most of us do not have the luxury of foreseeing the future. Name one strength and one weakness within your current system.

Brad: Strength: The connection with the technical colleges. This is a source for jobs and on-the-job training opportunities. Weakness: Apprenticeship Carolina's inability, at times, to connect employers with prospective apprentices/students.

Walter: Strength: Apprenticeship 2000 develops well-educated graduates. Each of them earns an Associate of Applied Science. Weakness: Recruiting costs lots of money. We need to find ways to reduce these costs. On a parallel note, the Charlotte-Mecklenburg School District runs a summer externship for STEM teachers. More teachers need to be exposed to these types of experiences in order to help counselors guide our students toward viable careers.

Authors: When it comes to setting up a RAP, what advice would you give to organizations wishing to follow in your footsteps.

Brad: First, make it easy (Apprenticeship Carolina does all the registering of apprentices for business partners). Second, incentivize the process.

Walter: Do not reinvent the wheel. There are plenty of models to consider.

 Apprentices gain experience using manufacturing equipment, which is necessary to develop their hands-on skills.



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▲ Each Apprenticeship 2000 graduate earns an Associate of Applied Science.

Size matters—like-sized firms need to join forces.

Authors: Is there anything else you would like to mention that we may have missed?

Brad: Apprenticeship Carolina's claim to fame is that it registered 97 companies—the most in the country in a one-year period. A point of clarification: not all RAPs need to be four years long. Apprenticeship Carolina has one CNA program that is one year long. This has been a huge success in terms of reducing turnover from 95 percent to less than 30 percent.

Walter: It is hard to turn a ship around that has been headed in the wrong direction for decades. Not everyone needs to pursue a four-year degree. Hopefully, before too long apprenticeship in the United States will become more common, like that in Switzerland.

Conclusion

When people from various walks of life work together, good things can happen. Both South Carolina and North Carolina have added value to their regions by building effective relationships. The Dept. of Labor's registered apprenticeship system serves as the medium that connects community stakeholders to solve the needs of business while providing relevant skills training to tomorrow's workforce.

If your team is interested in developing a win-win strategy using the new and improved apprenticeship system, then visit the Dept. of Labor's website for more information at www.dol.gov/featured/apprenticeship. Tech

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EXPLORE MORE

See a brief clip of President Obama speaking on job-training programs at www.youtube.com/watch?v= oFajkwW2Kmw

Read the testimony of Secretary of Labor Thomas E. Perez before the Subcommittee on Labor, Health and Human Services, Education and Related Agencies, U.S. House of Representatives on April 2, 2014, at www.dol.gov/newsroom/congress/20140402_Perez

ENDNOTES

- The Hayes Report was commissioned by the South Carolina Chamber of Commerce. Its findings helped set the direction for undertaking apprenticeship as a workforce solution in South Carolina.
- 2. MTU is a division of Rolls-Royce Power Systems.



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