



Wisconsin's Well-Structured Youth Apprenticeship Program

Robert I. Lerman and Lindsey Tyson

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Wisconsin's Youth Apprenticeship program is the oldest and largest ongoing youth apprenticeship (YA) program in the US. In the 2022–23 school year, 5,740 employers provided apprenticeships to 8,358 students, up from 1,600 employers and 2,292 apprentices in 2013–2014. As youth apprenticeship has reemerged as an attractive option for preparing young people for careers, Wisconsin's YA program offers interesting insights to policymakers and practitioners. This overview highlights the program's history, recent growth, and structure. The distinctive aspects of the program include the use of statewide curricula and skill standards so that a youth apprentice in Green Bay will learn and document the same skills as one in Kenosha. The state funds the program in a way that emphasizes local control, administration, and outreach to high school students and employers. The brief draws on perspectives from state officials, local program directors, and employers. We conclude with lessons from Wisconsin's program for policy and research. The main lesson is that it is feasible to create large numbers of youth apprenticeships at a modest government cost.

Youth Apprenticeship: Aspirations and Reality

Apprenticeships are a time-tested approach to learning for productive careers. They offer participants a distinctive combination of learning in classrooms, structured applied learning at the workplace, a job that pays as they contribute to production, and a recognized occupational credential. Using

apprenticeship to widen access to rewarding careers has attracted US policymakers and political leaders since the late 1980s. Two national commissions highlighted the labor market problems facing the majority of young people not completing college and having minimal public resources to enhance their transition from school to careers.¹ Policy researchers and some political leaders contrasted the weaknesses in US institutions with the success of apprenticeships for young people in other countries (Hamilton 1990; Lerman and Pouncy 1990).

In response, President George H. W. Bush proposed the Youth Apprenticeship Act of 1992 and President Bill Clinton signed the School-to-Work Opportunity Act (STWOA) in 1994. The Bush proposal² would have established a national framework for implementing comprehensive YA programs. Despite Clinton's long-standing support for youth apprenticeship, the STWOA downplayed serious apprenticeship programs, instead allowing state and local grantees to emphasize such thin interventions as job shadowing and internships. While few youth apprenticeships materialized from the Bush proposal and the Clinton Administration's act (Lerman 2003), Wisconsin had already started its YA system in 1991 under Republican governor Tommy Thompson and Democratic chief state school superintendent Herbert Grover.

In testifying before Congress in 1992, Superintendent Grover proudly stated, "Wisconsin has established one of the first statewide Youth Apprenticeship Programs in the nation. Business, the state department of labor, and the state education agency are cooperatively developing youth apprenticeships through work-based learning in significant state industries, such as printing, metal fabrication, health care, and government services. High school juniors and seniors who have passed the gateway assessment will earn while they learn and ultimately acquire both a high school diploma and a portable, statewide certificate of occupational mastery."³

Although interest in youth apprenticeship waned after the mid-1990s, recent years have witnessed renewed efforts to return the approach to the national agenda. News articles on youth apprenticeship increased from 89 in mid-2001 to mid-2003 to 149 in mid-2011 to mid-2013 and then jumped to 716 from 2021 to 2023.⁴ A group of foundations funded the New America Foundation to establish the Partnership for Youth Apprenticeship.⁵ As policymakers take another look at the potential of youth apprenticeship, it is worth asking what we can learn from America's longest and largest YA program.

This policy brief suggests the Wisconsin program has clear strengths that have enabled the program to reach tens of thousands of young people in the past decade. It describes key aspects of the Wisconsin Youth Apprenticeship program. We first consider the structure and operations of the program. In particular, we ask how the program has managed to generate significant numbers of apprenticeships. Next, we report comments from an employer and a local representative of the program and then conclude with perspectives on the implications for policy and research.

Structure of Wisconsin's Youth Apprenticeship Program

Registered apprenticeship programs operate under the authority of the Office of Apprenticeship within the US Department of Labor or designated State Apprenticeship Agencies. Sponsors of these programs

may be individual employers or entities that include groups of employers; they may be joint union-management or nonunion programs. Youth apprenticeships may or may not be embedded in the US registered apprenticeship system. Although some young people in Wisconsin become registered apprentices, Wisconsin's youth apprenticeship program operates almost completely outside its registered apprenticeship system.

The Wisconsin Department of Workforce Development operates the program with a \$6 million allocation from the state budget, supplemented by other workforce funds as needed. The legislature has proposed raising the budget to \$9 million in 2023–24 and to \$10 million in 2024–25. Each year, the Department of Workforce Development requests proposals from local entities, called consortia to develop and oversee youth apprenticeships. What constitutes a local consortium is highly flexible. Consortia can consist of either a single school district or a combination of school districts and other organizations such as cooperative educational service agencies (CESAs), chambers of commerce, workforce investment boards, one or more colleges from the Wisconsin Technical College System, or other community-based workforce organizations. Currently, 39 consortia receive grants to fund their youth apprenticeship programs. Examples include the Racine United School District, whose YA consortia is facilitated by Racine Manufacturing and Commerce, a chamber of commerce, in collaboration with the Racine United School District. For a variety of school districts in North Central Wisconsin, their partners include the North Central Wisconsin School to Career Partnership, which combines North Central Technical College in efforts with the school districts in the area. Five of the YA consortia in Wisconsin are primarily administered by a regional CESA, but that does not mean others wouldn't also coordinate with their regional CESA even if not fully administered by it. Regardless of primary administration, YA in Wisconsin uses partners both inside and outside of the high schools.

Each consortium applies for annual funding based on the expected number of youth apprentices. The grants provide up to \$1,100 per youth apprentice for consortia with at least 25 youth apprentices. An application for funding must cover the consortium's organizational structure, program design, key activities, and occupational fields, as well as information on its coordinator and fiscal agent. In addition, each grantee must describe the roles of a steering committee, data storage, coordination with other programs, recruitment processes for students and employers, plans for related instruction, and the allocation of funds. The grantees are also asked to list any industry-recognized certifications. The grants to the consortia currently equal \$1,100 per apprentice. The grant program operates on a reimbursement basis. The consortia are responsible for recruiting both employers and students.

One feature of the Wisconsin Youth Apprenticeship program is the use of common occupational skill standards across the state and for all employers creating apprenticeships. This approach is distinctive in the US, where most registered or unregistered apprenticeships follow the skill standards developed by each employer or group sponsor. In the registered apprenticeship system, the process of coming up with and submitting these skill standards (called work process schedules) for registration by a state or federal apprenticeship office typically takes months. Wisconsin's registered apprenticeship system shortens the time to register a new program to a few months for applicants using occupational skill frameworks already approved for use by other Wisconsin employers. The Wisconsin Youth

Apprenticeship approach is similar to what most other countries with robust apprenticeship systems use. Wisconsin provides skills standards checklists of the skills apprentices are expected to master and a list of courses for each apprenticeship pathway. Each program guide is developed through a collaboration of business, education, and trade representatives to identify the skills and knowledge that are necessary for successful program completion. The guides incorporate and are aligned with national industry skill standards for fields in which those exist.

Apprentices undergo training and engage in paid work in 1 of 13 broad YA program areas (synonymous with “career clusters”):

- agriculture, food, and natural resources
- architecture and construction
- art, A/V Technology, and communications
- business management and administration
- education and training
- finance
- health science
- hospitality, lodging, and tourism
- information technology
- manufacturing
- marketing
- science, technology, engineering, and mathematics (STEM)
- transportation, distribution, and logistics

As of May 2023, the state is creating YA programs in three additional program areas: government and public administration; human services; and law, public safety, corrections, and security.

Within each broad pathway are several concentrations. For example, the finance pathway covers business financial management or accounting services basic and accounting services advanced; banking and related services or banking basic and banking advanced; and insurance services. See, for example, the skills checklist and other materials for the manufacturing youth apprenticeship⁶ as well for materials for other occupational fields.⁷

The program requires employers to provide at least 450 hours of on-the-job learning and paid work experience and schools to offer at least 180 hours of related technical instruction. For apprenticeships beginning in a student’s junior year of high school, employers offer 900 hours of on-the-job learning and paid work. Employers select the apprentices to hire and train, participate in mentor training and in program reviews, and follow the skill standards in their training. The work-based learning component

can start upon completion of a student's sophomore year or as late as January of the senior year (for the 450-hour level). Local consortia are expected to build youth apprenticeship programs in which at least 80 percent of two-year youth apprentices receive a high school diploma upon completing their apprenticeship and 60 percent of two-year youth apprentices are offered employment by the training employer after the youth apprenticeship.

Schools, student apprentices, parents, and consortia all play their own roles in the program. Having the high schools or community colleges as part of dual enrollment relieves employers from having to pay for related technical instruction. Employers never pay for related instruction in youth apprenticeship. Instructors teaching related courses are asked to incorporate youth apprenticeship objectives, especially integrating classroom learning with worksite training. Teachers participate in progress reviews and provide feedback to the youth apprenticeship coordinator.

The consortia employ regional coordinators that lead on a variety of program components. In addition to developing the proposals for the consortia to run the local youth apprenticeship programs, YA coordinators recruit employers, work with school representatives to market the program to students, provide mentor training, arrange related technical instruction, and provide reports to the Department of Workforce Development.

School districts that agree to join a consortium must list each participating high school and the corresponding school-based coordinator. These school-based coordinators typically are school staff that take on this additional responsibility. While working with the regional coordinator, school-based coordinators assist with student recruitment; coordinate meetings with school staff, students, parents, and community organizations; meet with youth apprentices regularly; help find employers and mentors; and oversee the apprentice's school outcomes, including academic grades and graduation status. High schools are responsible for integrating the youth apprenticeship program in the student's overall educational program, which includes determining available related instruction, providing credit for participation in youth apprenticeships, and signing the education/training agreement for each student and complying with its requirements.

Informal recruiting of apprentices is common. One small study in Manitowoc County found that 35 percent of apprentices learned about the program from teachers and another 16 percent from friends or parents (Krull 2009).

The education/training agreement includes descriptions of the responsibilities of the various parties involved in a youth apprenticeship: the apprentice, their parents or guardians, the employer, and the school district. Coordinators make sure the relevant parties sign the agreement and then provide a copy of the agreement with the Wisconsin Department of Workforce Development. Regional coordinators register the apprentices using a web-based registration system that records student information, industry and pathway, and employer information and upload the signed agreement.

Completing a youth apprenticeship requires attainment of skills specified in the skill standards checklist, completing the required work hours, completing the related courses, and completing high

school. Once apprentices fulfill these requirements, the state director of the Wisconsin Bureau of Apprenticeship Standards issues them a certificate of occupational proficiency.

One potential barrier to the further expansion of youth apprenticeships relates to the funding for dual enrollment classes. Youth apprentices may not have access to high school courses for all their related instruction. In these cases, the apprentices usually take classes from one of 52 locations within Wisconsin's 16 technical colleges. The state mandates that school districts pay for these classes as part of the dual enrollment (high school and college) program. Director of the Bureau of Apprenticeship Standards David Polk noted,

Each district has to fund dual enrollment on their own. Some just don't. Some have too many budgetary restraints. On the public-school side, if a high school student does choose to pursue dual enrollment, the district does have to find a way to pay for it. That part is in legislation for it, but there isn't a budget for it. [It is] an unfunded mandate. It's not widely advertised at all because not all districts have the funding...If you think about it this way—it can be expensive pretty quickly, even though each credit is only \$180, the overall cost adds up so quickly.

So while YA programs can be valuable to both community employers and students, the costs to schools can be high when they have a successful program. Moreover, the dual enrollment costs linked to youth apprenticeship can cause schools to limit or become less than enthusiastic about scaling apprenticeships. This mandate is an unfunded burden on school districts and therefore acts as a disincentive to promote youth apprenticeship fully. There is no study of whether another funding model for dual enrollment would lead to further expansion of youth apprenticeship, but having the state fund dual enrollment, at least for youth apprentices required to take college courses, would eliminate a potential barrier.

History and Recent Growth

Since the early days of Wisconsin Youth Apprenticeship, the program has attracted bipartisan support, albeit with modest public funding. Between 1994 and 2011, the program served about 16,000 students (Phelps 2013). But, as of 2008–09, the state was allocating only \$2.2 million to support apprenticeship and by 2011, only about 1,700 young people participated. However, in 2018, Republican governor Scott Walker increased the budget for youth apprenticeship to nearly \$4 million and encouraged the YA program to reach seventh and eighth graders.⁸ This resulted in a one-year pilot program with grants to technical colleges and Boys & Girls Clubs for summer career exploration with that age group. Current Democratic governor Tony Evers continues to voice strong support for youth apprenticeship.⁹

Recent years have witnessed a rapid expansion in the number of Wisconsin youth apprentices.¹⁰ Between 2013–14 and 2023, the number of youth apprentices increased nearly fourfold from 2,292 to 8,361 (figure 1). Similarly, the program achieved nearly a fourfold increase in the number of employers. By 2023, nearly 6,000 employers had hired a youth apprentice, up from 1,600 in the 2013–2014 school year. The apprenticeships cover a wide range of occupations, from agriculture and health to manufacturing and logistics. Figure 2 displays the striking increases in apprenticeships in five occupational areas.

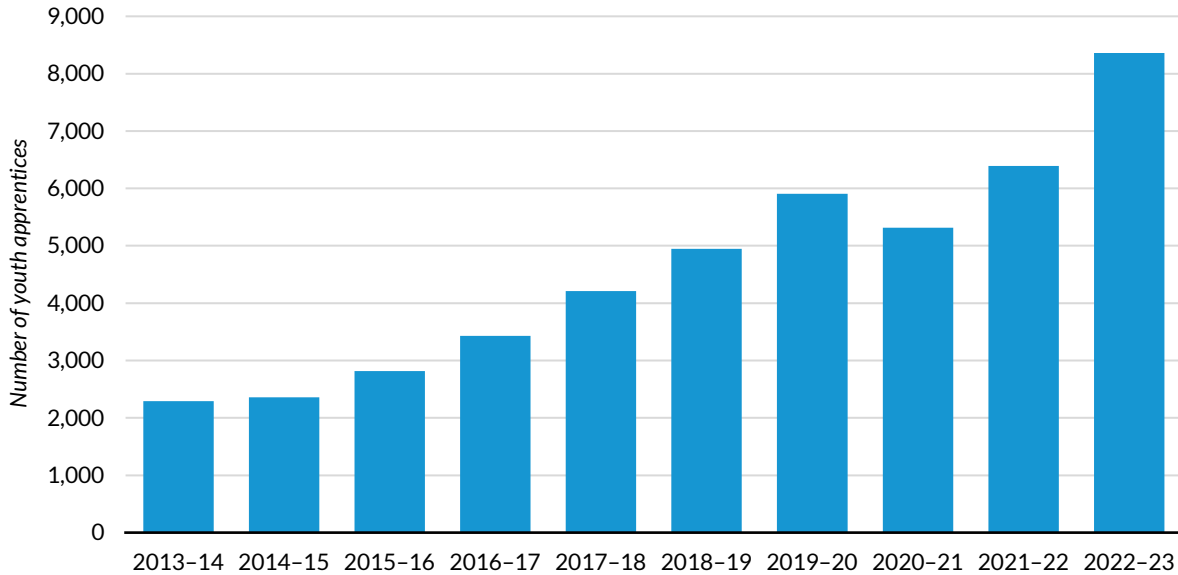
Unlike the construction-dominated registered apprenticeship programs, where women make up only about 10 percent of apprentices, Wisconsin's youth apprenticeship program has a wide range of occupations and has traditionally attracted a large share of students. For example, in the 2022–23 school year, female students made up 42 percent of all apprentices. Racial and ethnic diversity were less common. Students of color accounted for only 13 percent of youth apprentices but 20 percent of the Wisconsin population. Participation is especially low among African American students, which may be due partly to the low number of apprenticeships in cities, such as Milwaukee, where African Americans are concentrated. The Milwaukee public school consortium reported only 86 apprentices, about 1 percent of the state total or far less than Milwaukee's 9 percent of Wisconsin's public school population.

Quantitative assessments of program impacts on apprentices and employers are limited, but some evidence drawn from informal methods indicates positive impacts. First, participating employers have long expressed satisfaction with the program. A 2003 survey found that nearly all employers reported they would recommend the program to others, and 85 percent said it was beneficial to their companies (Burton 2009). Phelps and Jing (1997) found that, as of 1997, 90 percent of employers would recommend youth apprenticeship to other employers, and 85 percent of employers reported benefiting from the program "a lot" or "somewhat."

Second, although few studies have examined long-term outcomes of youth apprentices, early evidence from a follow-up study of high school students who participated in a Wisconsin youth apprenticeship in printing documented participant earnings substantially above expected earnings for similar young people (Orr 1995). Compared with their high school peers, these youth apprentices had lower rates of absenteeism, were more likely to have long-term career plans and interest in the printing industry and were more likely to have concrete long-term educational plans. Employers generally rated the youth apprentices more favorably than other entry-level workers. And, six to eight months after high school graduation, almost all the printing-apprenticeship graduates (94 percent) were working in the printing industry compared with only 13 percent of the printing-classes-only graduates.

FIGURE 1

Upward Trend in Wisconsin Youth Apprentices, 2013–23

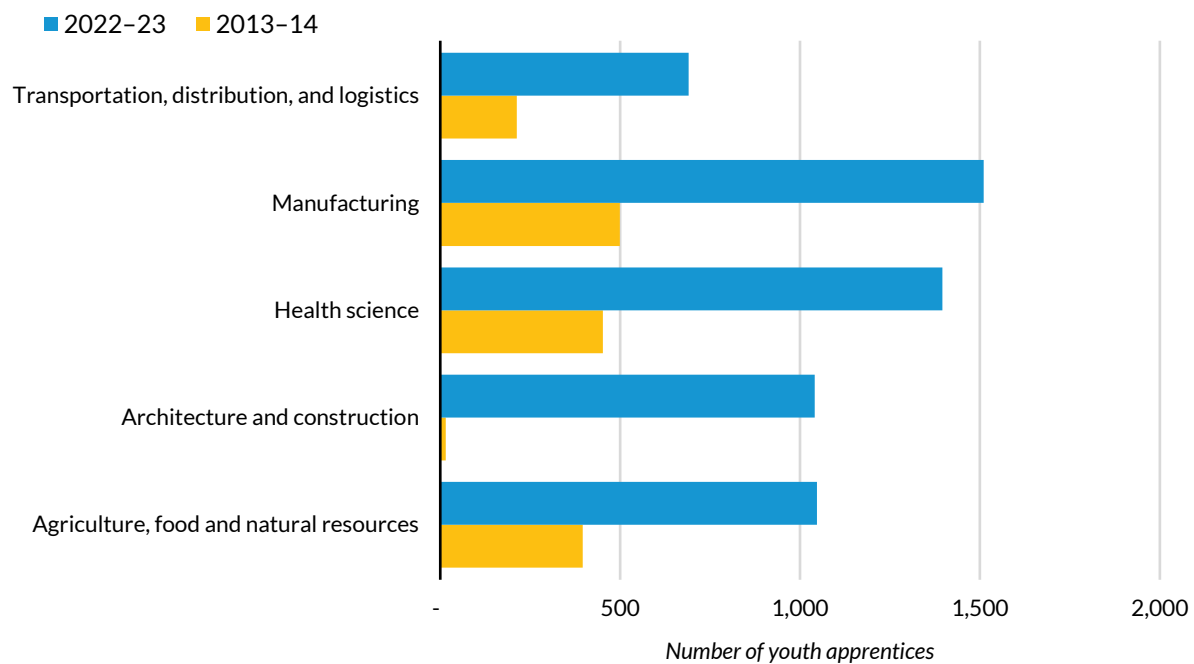


Source: “YA Student Participation Dashboard,” Wisconsin Department of Workforce Development, accessed July 6, 2023, <https://dwd.wisconsin.gov/apprenticeship/ya/yoda.htm>.

A qualitative study by Robert Halpern (2009) found that Wisconsin youth apprenticeships help young people develop independence and self-confidence through their ability to perform difficult tasks. He notes that “Apprentices learn through observation, imitation, trial and error, and reiteration; in other words, through force of experience.” (p. 6). While apprentices are expected to demonstrate professionalism and care, they are not expected to be perfect.

FIGURE 2

Increases in Wisconsin Youth Apprentices by Selected Occupations, 2013–23



Source: “YA Student Participation Dashboard,” Wisconsin Department of Workforce Development, accessed July 6, 2023, <https://dwd.wisconsin.gov/apprenticeship/ya/yoda.htm>.

Other small research studies have found selected impacts on apprentices. Slupe (2014) found benefits for youth apprentices in career planning and self-efficacy; Mindham and Schultz (2020) showed youth apprentices were likely to remain in their fields after graduation.¹¹

The scale, duration, and occupational diversity of Wisconsin’s Youth Apprenticeship program are impressive. Yet the program has not attracted widespread interest. The interim report of the Advisory Committee on Apprenticeship (ACA) mentions the term “youth apprenticeship” but does not mention Wisconsin’s large program (DOL 2022). Moreover, the youth apprenticeship program that the ACA chose to visit was CareerWise Colorado, which had fewer than 400 young people in apprenticeships as of July 2022, which was only about 6 percent of Wisconsin’s total during that time (CareerWise Colorado 2023).

Perspectives from the Field

Section Chief of Wisconsin Youth Apprenticeship John Keckhaver explains the recent rapid growth in apprenticeships and employers as resulting from increased awareness. “I think the awareness of YA has increased pretty significantly in the last decade. The awareness is growing quickly. The employers demand for workforce—many of them instinctively say ‘let’s get them when they are young.’ Let’s get in the high schools and then they find out about YA. Once it’s known, take the construction example—once

they see others doing it, then they see it's possible. Hiring is risk and reward and hiring [young people] does have riskier items. The employers see when one business is doing it in their field, there is an effect where they also expand."

Tom Hermann, consortium and youth apprenticeship coordinator for the Southwest Milwaukee Consortium, attributes YA success in Wisconsin to YA being viewed as the "gold standard" for student preparation, combining career-based learning experiences, classroom learning, and the commitment of dedicated students and employers. Hermann points out that the K-12 education system has traditional learning covered, going so far as to say that some elementary and secondary schools are "college factories," only providing their students with the tools to head to more education. This approach can mean that, as Hermann indicated, "We're not servicing every kid...And quite honestly, it's just not a good decision. So let's take what we do well [the education system] and let's build on it. Let's get these kids out [in the workforce]."

This is where YA comes into play in providing those nontraditional skills that are in demand. One success of Wisconsin YA that Hermann shared is the consortium model that allows for better pooling of resources. Most schools are doing their best to serve all of their students' needs, but it is impossible to achieve that. But students in the consortium can use any school in their consortium for the YA, giving each student more opportunity when it comes to exploring career pathways offered. Hermann leaned into the presentation of YA as "incredible fiscal sense and just [an] incredibly great idea." Hermann expanded, "I don't know why more school districts don't do this...It's the most insane thing I've ever seen, you know, we're all in this together...we're all taking care of kids. Let's just do it together." Hermann's consortium has seen growth as well: one of the causes he attributes the growth to is the work he puts in at each of the schools that fall under his jurisdiction and how he fosters relationships with the students' teachers in those schools, even to a point where now the students are often coming to him. Hermann explained, "I go out and I literally go to all of our at-risk classes...I talk to all of our special needs students, I talk to all of our gifted students, I talk to anybody that's willing to listen to me, you know, and I'm very, very objective about, 'here [are] all the options. Okay. If this looks good to you, then let's talk about [YA].'"

Wisconsin's consortium model provides local staff on the ground to spread the message about YA opportunities across the state by providing someone local to talk to employers and students. The consortia have wide discretion on how they will use the grant funds to operate their programs aside from giving the money to potential employer sponsors in their areas. Many use the money at least in part to pay for their consortium directors, possible advertising for programs, funding toward the related technical instruction, and supplies youth apprentices in their programs may need.

A perspective on the funding model comes from Britta Rotering, supervisor of career and technical education at the School District of La Crosse, Wisconsin, who oversees the La Crosse Youth Apprenticeship Consortium, another successful and growing program in the state. Rotering indicates that the grant writing process that supports the efforts of the consortia can create some constraints because each year, when they write to anticipate how many apprentices they will have, they can end up with 12 percent over or under what they estimate.

The reason Rotering does not like this policy is that it can encourage consortium leaders to either place students into programs that are not going to be successful for them or not select a program that would be an excellent fit for them. More importantly, how a program operates and how closely its prior year estimation matches its actual results will impact the program's score and consequently its grant funding. Notably, regardless of whether a request is approved or denied, a program's future years could be impacted heavily by over- or undershooting the target. Rotering spoke to how the program in La Crosse will be expanding. As of now, she oversees all career and technical education. (And typically, there would be a separate coordinator for YA and funding will be used to cover this new role.) This additional person will allow for La Crosse YA to grow, as—at the time we spoke with Rotering—coordinating nearly 50 students on top of the other duties presents an overloaded role. Much like Hermann, at this time, Rotering is the one “on the ground” when it comes to communicating with sophomores about what their opportunities in the YA programs will be. Rotering is also involved with students who have individualized education programs and attends meetings for such students to discuss career opportunities, in addition to consulting with the Wisconsin Department of Vocational Rehabilitation, further adding to the need for another individual to join their efforts.

The work of a consortium leader undoubtedly involves wearing many hats, as Rotering indicated she also is the main point of contact reaching out to business and industry leaders in the area to bring more employers into sponsoring YA programs. That said, even with overloaded responsibilities, with the right people in these roles, the programs are growing and flourishing because of the fundamental soundness of the concept and the institutional knowledge students and community members gain from the experience.

We spoke with several individuals about the supply and demand of young people looking to become youth apprentices versus positions being offered by employers, and the commentary was varied. Hermann in Southwest Milwaukee indicated, “We generally have at any one time more job offers than we have students...And that's again because I don't think we're 100 percent—I don't think we're at full capacity for the number of kids that want to do it, that fully know about it in time.” Rotering indicated that certain pathways have more openings that can be filled with apprentices than others, and some of those are because of the “18-year-old hurdle.” In Rotering's area of the state, there is a huge demand for welder-fabricators, and there are young people who want the role, but larger companies often have found obstacles in providing apprenticeships for 16- and 17-year-old students. Rotering said, “I find that with the larger employers, it is a slow, slow roll and so that's one [employer that] is close enough to one of our high schools that our students could walk there. We are absolutely underserving because I can't get through those...doors and I've probably had eight meetings there in the last nine months.”

Another insight into Wisconsin YA came from Katie Feuerhelm, educational consultant in academic and career planning for CESA 11. She oversees a large YA consortium program covering 13 counties in Northwest Wisconsin. Feuerhelm indicates that the demand for apprentices is at least as high as the supply of young people wanting apprenticeships. As of April 2023, the overall unemployment rate in Wisconsin was only 2.4 percent. The consortia have not had any problem finding jobs for their students

interested in YA. Feuerhelm explained that the need for full-time labor in the area is strong, and the YA students can fill some of the gaps employers are facing.

Section Chief Keckhaver had this to say regarding the supply and demand of YA apprentices to job openings: “We hear both. It depends on the area. In some places, there are more students interested in employment in a given field than there are employers with open positions, and in other areas it’s the opposite. What the overall balance is, I’m not sure.”

Greg Schinker with McFarlane Manufacturing, a YA employer and trainer in Wisconsin, commented, “Current state the last couple of years—we’ve been lucky that I don’t think we’ve turned anybody away *per se* for a while...but we don’t have trouble finding [apprentices].” Schinker noted the success of the program has gotten the ball rolling for them and that he is aware they will likely have to limit the number of students they can bring on. However, at this time, they are happy being able to accommodate all the students who have shown interest.

What does the long run look like for some of these apprentices? For McFarlane Manufacturing, Schinker indicated, “We’ve had youth apprentices that went through the program, and we’ve hired them on and they’re very successful and we love having them here. We’ve had some that we’d love to have hired, but they went on to school.” This seems to be a common trend; as Hermann also estimated that about half of the students that go through the YA program go on to a four-year college and the other half go into the workforce or into a registered apprenticeship. Right now, the exact numbers to support these claims are lacking, as Keckhaver noted that data tracking is something he wants to see improved upon to further show the success of the programs across the state. Data tracking in general is used to see the connection from YA to registered apprenticeship, how many youth apprentices stay in the same career cluster, how many stay with the employers, and many other factors, including how much YA students earn. These are all data points the Wisconsin Bureau of Apprenticeship Standards is interested in providing, but some of these efforts are pushed aside when the first priority is increasing the availability of funds to operate the programs.

What could more funding do? Herman indicated,

What I would do with that money? I would pay somebody within the building hourly to just, maybe spend an hour a week just checking on our students and making sure that they’re doing well. If they need anything and maybe they’re ready to do a different job because it’s kind of run its course. I’m saying it’s a lot of “little of this little of that.” It’s not anything I can really hammer down.

This was noted across our discussions: that more hands in the schools and working with the students and employers alike would not only help programs grow but would provide a better rounded-out program end to end.

Policy and Research Implications

The history and practices of Wisconsin's Youth Apprenticeship program, the oldest and largest ongoing youth apprenticeship program in the US, offer lessons for other states and federal policy. Perhaps the most important lesson is that a modest budgetary outlay can generate large numbers of career-focused opportunities for high school students. With less than 10 percent of the annual cost of educating a high school student, the program funds extensive work-based learning in a valued career field, jobs that pay a salary in return for the student's productivity, and adult mentorship. Local consortia are able to attract large numbers of employers (more than 6,000) to provide ongoing training without any government subsidy. The success of consortia in achieving the current scale is impressive, especially given the limited resources provided by the state. The state grants to consortia are performance based. Funding is on a per apprentice basis and consortia that do not meet targets on which their funding was based must return excess funds. This approach yields strong incentives for local consortia to stimulate as many apprenticeships as they promise. Consortia can receive additional funds if their apprenticeship numbers significantly exceed their proposed targets. In the third quarter of each year, the state can reallocate funds from consortia that are likely unable to reach their estimated numbers of apprentices to consortia able to exceed their initial projections.

A second lesson is that skill standards that are common throughout the state simplify employer participation in the program and make the credentials apprentices earn more portable. Unlike some registered apprenticeship programs, employer sponsors do not have to come up with their own standards (sometimes called work process schedules).

Third, many high school students are willing to devote at least 900 hours of work-based learning over two years to gain significant occupation-specific competencies and qualifications. Moreover, involvement in their apprenticeships seems to enhance their likelihood of graduating high school. In a modest number of cases, the youth apprentice transitions to a registered apprenticeship for more extensive training. However, current linkages between young people and registered apprenticeship systems are limited.

Fourth, it is feasible to draw on dual enrollment courses in technical colleges to supplement an apprentice's related instruction when such courses are unavailable in the apprentice's local high school. But a drawback of Wisconsin's approach is that local school districts and not the state have to find funding for dual enrollment courses. And this budgetary burden on the schools can lead to a less enthusiastic embrace of youth apprenticeship, which can reduce the number of high school students who gain access to apprenticeships.

Fifth, increasing youth apprenticeships in the Milwaukee public school consortium from their strikingly low current level (86 as of 2022–23) could substantially increase access to apprenticeships, especially for African American students, who make up about 50 percent of Milwaukee students.

Given the expanding scale of Wisconsin's program, it is important to learn more about impacts on students and employers as well as how youth apprenticeship influences registered apprenticeships in

Wisconsin. For some employers, youth apprenticeships may be especially appealing in Wisconsin because the state-registered program requires employers to pay wages during an apprentice's classroom instruction. Another factor is that many occupations available within the youth apprenticeship program have not yet been deemed apprenticeable in the registered system. Introducing new occupations as registered apprenticeship programs is a lengthy process that requires additional time and resources be provided by the employer to satisfy the state's requirements.

Research on how youth apprenticeships alter participants' careers and life trajectories is important for determining the role of youth apprenticeship programs, not only in Wisconsin but also in other parts of the country. Research on the returns to employers can be helpful in promoting Wisconsin's program across the state and in demonstrating actions that lead to high returns. Evidence from these two bodies of research can yield estimates of the net social benefits to state investments in youth apprenticeship.

Notes

- ¹ The two influential reports were *The Forgotten Half* published in 1988 by the William T. Grant Foundation and *America's Choice: High Skills or Low Wages*, produced in 1990 by the Commission on the Skills of the American Workforce.
- ² George H. W. Bush, "Message to the Congress Transmitting Proposed Legislation on Youth Apprenticeship," George H. W. Bush Presidential Library and Museum public papers, May 13, 1992, <https://bush41library.tamu.edu/archives/public-papers/4306>.
- ³ "Council of Chief State School Officers Promotes New Initiative to Prepare Youth for Employment," *PR Newswire*, March 24, 1992.
- ⁴ Authors' search of Lexis-Nexis.
- ⁵ "Partnership to Advance Youth Apprenticeship," *New America*, accessed July 6, 2023, <https://www.newamerica.org/education-policy/partnership-advance-youth-apprenticeship/>.
- ⁶ "Manufacturing," Wisconsin Department of Workforce Development (DWD), accessed July 6, 2023, <https://dwd.wisconsin.gov/apprenticeship/ya/manufacturing.htm>.
- ⁷ "Youth Apprenticeship Programs," Wisconsin DWD, accessed July 6, 2023, <https://dwd.wisconsin.gov/apprenticeship/ya/programs.htm>.
- ⁸ See Jessie Opoien, "Scott Walker Launches Push to Expand Youth Apprenticeship Program to Middle School Students," *The Cap Times*, September 8, 2018, <https://urbanmilwaukee.com/pressrelease/governor-walker-announces-a-record-3-9-million-in-youth-apprenticeship-state-grants-to-serve-4300-students/>.
- ⁹ For example, see "Gov. Evers, DWD Announce Youth Apprenticeship Offerings, 14 New Occupational Pathways for Students," press release, Wisconsin DWD, August 29, 2022, <https://dwd.wi.gov/press/2022/220829-youth-apprenticeship-pathways.htm>.
- ¹⁰ See the numbers in Phelps (2012) and the YA Student Participation Dashboard," Wisconsin DWD, accessed July 6, 2023, <https://www.dwd.wisconsin.gov/apprenticeship/ya/yoda.htm>.
- ¹¹ In Mindham and Schultz (2020), 74 percent of 46 former youth apprentices in a small region remained in their field of study after graduation.

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About the Authors

Robert Lerman is an Institute fellow in the Center on Labor, Human Services, and Population at the Urban Institute as well as professor of economics at American University and a research fellow at IZA in Bonn, Germany. A leading expert on apprenticeship, he recently established the American Institute for Innovative Apprenticeship. His current research focus is on skills, employer training, apprenticeship programs in the United States and abroad, and housing policies. Lerman earned his AB at Brandeis University and his PhD in economics at the Massachusetts Institute of Technology.

Lindsey Tyson is a training and technical assistance coordinator in the Center on Labor, Human Services, and Population. Tyson's work centers around conducting research and providing technical assistance around apprenticeship-based initiatives and building apprenticeship programs. Tyson earned

her BA at the University of Wisconsin–Oshkosh in international studies and is pursuing her MA in labor and employment relations at Rutgers.

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500 L'Enfant Plaza SW
Washington, DC 20024
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