

From Training to Crew: A New Model for Building the Construction Workforce

439,000

That's the number of additional construction workers the United States must attract in 2025 just to meet industry demand, according to the Associated Builders and Contractors ([ABC](#)). This staggering shortfall signals a broken pipeline between learning environments and the skilled workforce.

Now is the moment to fix this. Building a reliable workforce requires a development model that turns learners into safe, skilled professionals ready to strengthen the construction industry. ([Associated Builders and Contractors](#))



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Challenges Facing Today's Construction Industry

A shortage of skilled workers

The construction labor gap is widening even as the industry grows. Demand is surging from data-center and chip-factory projects, alongside federal investments in infrastructure, energy, and manufacturing — expected to generate more than 300,000 jobs annually later this decade, according to McKinsey & Company's 2024 construction outlook. The bipartisan infrastructure law also guarantees prevailing wages under Davis-Bacon regulations.

But there aren't enough trained craft professionals to meet this demand. A 2025 survey by the Associated General Contractors of America (AGC) and the National Center for Construction Education & Research (NCCER) found that 92% of firms have open craft positions and 57% report that applicants lack the required skills or credentials.

Smaller contractors feel the shortage most acutely, often unable to offer the same stability, benefits, or formal training as larger firms. As a result, new hires must be taught on the job, slowing projects and straining experienced workers. This reality calls for a fundamental shift in how the industry, and society, approaches workforce development.

An aging workforce, a widening skills gap

The U.S. construction workforce is aging fast. The median age is 42, and nearly half are 45 or older, according to the U.S. Bureau of Labor Statistics (2025). NCCER projects that by 2031, 41% of today's workforce will retire.

This wave of retirements means the industry is losing not only people but also the knowledge that keeps projects safe, efficient, and high quality. Recruiting young talent is part of the solution, but lasting progress requires systematically passing on expertise through mentoring and strengthening it with structured, on-the-job training. Without this, the skills gap will only grow wider.

Construction industry stigma

A major force that's driving younger people away from construction is the social stigma that has historically surrounded the choice to go into a trade over going to a four-year college. It is a misconception that has contributed to a subsequent decline in people seeking employment in the skilled trades.

As a society, we've steadily undervalued work that is, in reality, highly skilled and essential. Electricians, mechanics, auto body technicians, and construction craft professionals are the people who make modern life possible.

Paradoxically, as the supply of skilled tradespeople has declined, demand for their work has stayed strong, driving wages upward. According to NCCER's 2024 Construction Craft Salary Survey, average annual wages ranged from \$52,520 for a signal person to \$84,760 for an instrumentation technician.

Unfortunately, the stigma of trade work remains, and in many cases, it negates the objective reality of high earnings in these professions.

Unclear career pathways

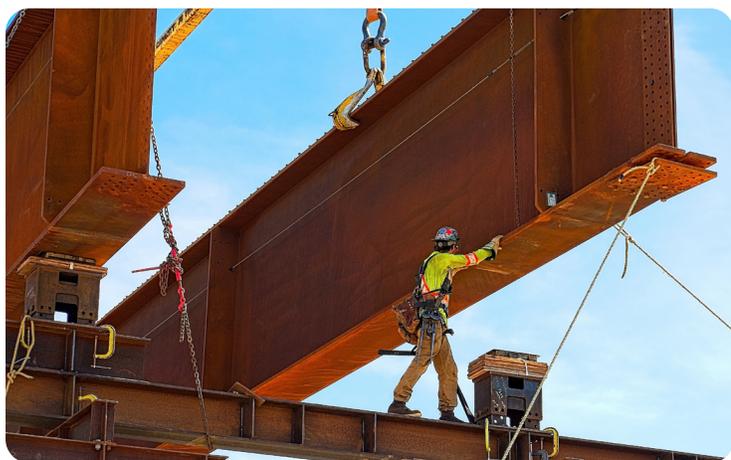
Another barrier to entry for construction craft workers is the lack of knowledge about how to get started in the industry and what a career in construction looks like, long-term.

Most people discover construction careers through word of mouth, but even when interest exists, would-be workers often struggle to find clear entry points or accessible training.

Another issue facing would-be construction workers is finding an industry recognized training program that can help them develop the technical and

Most people who get into the construction trades do so through word-of-mouth.

intellectual skills they need to be successful in the job. Some larger contractors who have the resources to invest in formal training programs do so, but there is often a concern that their investment will be wasted if an employee decides to leave the company.

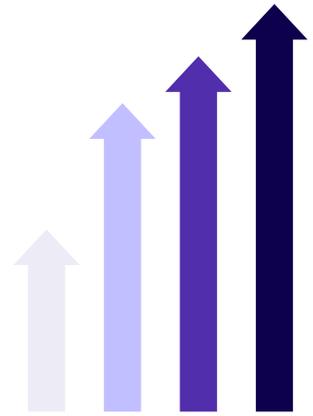


This line of thinking highlights a larger issue, which is the tension between an individual mindset and an industry mindset. A contractor with an individual mindset sees an educational training program as a dubious investment of time and resources in an employee who can choose to leave whenever they want. A contractor

with an industry mindset, on the other hand, sees a different picture and understands that each worker they train is another knowledgeable individual who can help the construction industry grow, regardless of who their employer is.

How much do construction workers make?

- \$49,920 highway worker
- \$85,072 powerline worker
- \$90,299 project supervisors
- \$98,965 project managers



ANNUAL SALARY RANGES FOR CONSTRUCTION CRAFT AREAS



How Education and Employers Can Help

The path to solving America's construction workforce shortage begins with education, and with a shared strategy where schools and employers work together to move talent from classroom to crew.

At the heart of this model is training, which gives employers confidence in proven skills while showing students that construction offers respected, rewarding careers. By validating ability, dismantling outdated stigmas, and sparking interest early, education and credentialing lay the foundation for a stronger workforce — one that depends on both educators and employers to succeed.

The educator: architect of the workforce

Educators shape the future workforce. By strengthening programs with industry-driven standards and digital tools, they can ensure what they teach continues to be trusted by employers and valued by students.

- **Align with industry standards:** Programs built around NCCER's curricula ensure students earn credentials that signal job readiness from day one.
- **Embrace digital transformation:** Tools like NCCERconnect let instructors personalize learning and free up time for hands-on support.
- **Forge employer partnerships:** Strong ties with local employers create internships, advisory boards, and direct hiring pipelines that keep training relevant to real-world needs.

Credentialing, which is achieved by going through formal training and examination, is a significant distinction in construction.

The employer: builder of the future crew

In today's tight labor market, employers can't passively wait for talent — they must help build it.

- **Invest in structured training:** Formal training that comes with credentials ensures every new hire receives consistent, safety-focused preparation.
- **Leverage digital tools:** Platforms like NCCERconnect streamline onboarding and upskilling, improving retention and accelerating readiness.
- **Partner with education:** Employers who actively recruit from NCCER-aligned schools strengthen the talent pipeline and secure steady access to skilled candidates.

Recruiting and Training the Next Generation

As a society, we need to acknowledge the importance of being a trades person in the construction industry. Construction has long been approached as a second choice or alternative for students instead of a viable pathway to a successful, lifelong career. Several industry-supported campaigns exist to address this misconception and shed light on the importance of the trades.

One initiative, Build Your Future, distributes numerous free resources showcasing the viability, value, and flexibility of careers in construction. These resources include the construction career path, which demonstrates that a person entering the construction industry as a carpenter doesn't have to continue being a carpenter for their entire career. The initiative highlights that there are a variety of options for advancement in construction and multiple paths to get to that top position, should someone choose to pursue it.

Partnering with schools and CTE programs

More than 11 million high school students are currently enrolled in career and technical education (CTE) nationwide, making these pathways one of the most effective pipelines for building the next generation of craft professionals. Yet most of that potential goes untapped. The U.S. Department of Education reports that while 80% of high-schoolers take at least one CTE course, only a small fraction complete a full construction track.

The solution is to start teaching kids trade skills sooner. Hands-on experiences in elementary and middle school help students connect their natural curiosity with future careers. The creativity that leads young children to stack blocks and Legos is the same drive that, later on, allows them to design and build with steel and concrete.

By working with CTE providers and showing how construction links to subjects like math, art, and science, the industry can help educators make learning come alive — and ensure more students see the skilled trades not as a fallback, but as a respected and rewarding career choice.

Championing workforce development

Another key component of creating a stronger construction workforce for the future is to offer credentialing programs and ongoing learning opportunities to qualified craft professionals. Doing so can help solve the initial barrier to entry into the industry and stimulate long-term career growth. Additionally, the turn-key solutions developed by NCCER, a not-for-profit organization, provide access to training and certification resources.

Through NCCER, contractors and industry associations can build flexible hybrid programs tailored to their workforce or member's needs. Often these programs are developed to train new hires, build apprenticeships, identify skills gaps, and upskill craft professionals. NCCER's resources provide a solid foundation for structuring a workforce development solution that leads to portable, globally recognized credentials.

With the current construction worker shortage and low construction unemployment rate, industry trends indicate that construction company owners might have to consider hiring tradespeople with less experience, which means that they might also have to invest more in their onboarding and training programs. This circles back to the idea that a mindset shift from individual-focused to industry-focused is crucial for the future of the construction industry.

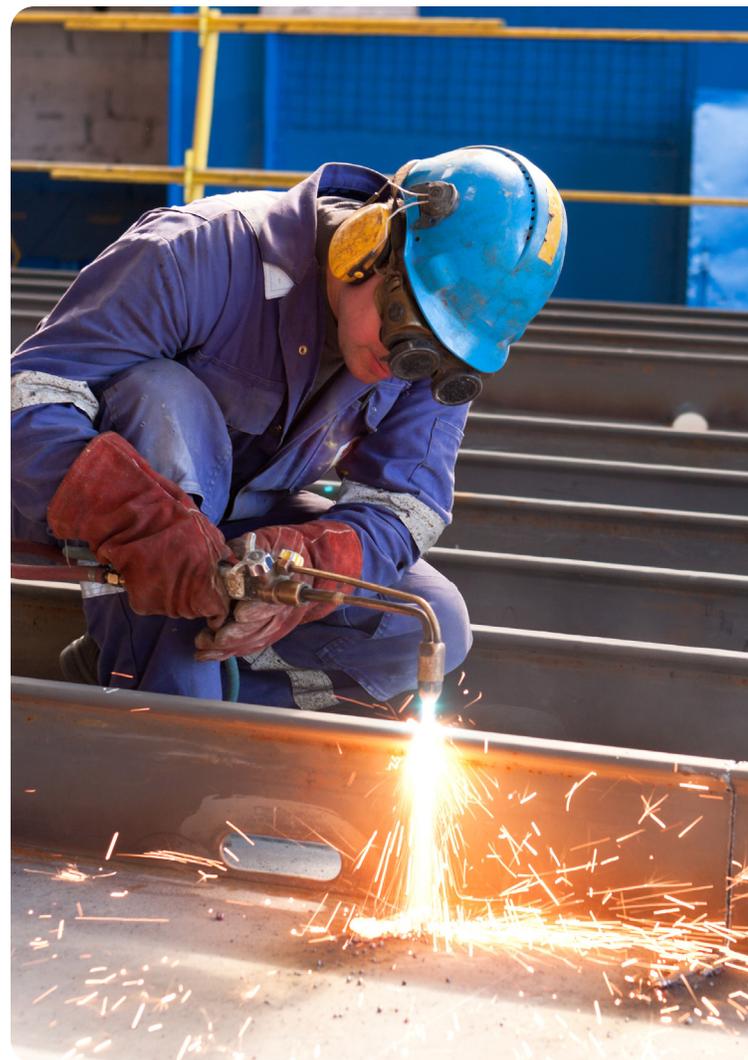
Expanding the adoption of digital tools

Digital learning is an underutilized training solution, despite the fact that it increases the accessibility and standardization of training programs, and could result in a larger and more well-trained workforce. NCCER and Pearson, a leader in digital innovation in the educational publishing industry, have teamed up to make construction craft training accessible to a larger population of people by providing high-quality online learning opportunities.

Harnessing digital resources more strategically could also transform how the industry attracts new talent, a need made clear by data showing that the number of people actively applying for construction jobs online has dropped significantly in recent years and has yet to recover.

While the precise reasons for this decline aren't entirely clear, what is apparent is that the industry must take steps to more effectively utilize online job websites, social media platforms, and other digital resources to increase outreach and recruitment efforts.

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Conclusions

The construction industry plays a vital role in our economy and our communities, yet chronic labor shortages threaten its ability to grow.

Addressing this challenge isn't simply a matter of spending more; it requires moving away from reactive hiring and toward a proactive, strategic approach to workforce development. Building a stronger future for the industry will mean coordinated investments of time, money and energy from construction companies, K-12 educators, and government officials.

NCCER's model offers a framework for this shift: by linking educators with employers and harnessing Pearson's connected digital learning ecosystem, it creates a new pipeline of talent and equips craft professionals with the skills and credentials needed for long-term success.

Appendix

Digital resources

[Digital Learning](#)

[NCCER Catalog](#)



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About NCCER

NCCER is a not-for-profit 501(c)(3) education foundation created in 1996 as The National Center for Construction Education and Research. It was developed with the support of more than 125 construction CEOs and various association and academic leaders who united to revolutionize training for the construction industry. Sharing the common goal of developing a safe and productive workforce, these companies created a standardized training and credentialing program for the industry.

This progressive program has evolved into curricula for more than 40 craft and maintenance areas and a complete series of more than 70 assessments offered in over 6,000 NCCER-accredited training and assessment locations across the United States.

Please contact your Pearson Executive Director with your questions about curricula, instructor resources and NCCERconnect.

Please contact your NCCER Workforce Development Director with your questions about the NCCER credentialing.

Pearson and NCCER Partnership

NCCER and Pearson are proud partners, supporting all your craft training curriculum and credentialing needs. Together, we're bringing engaging content to educators and delivering NCCERconnect online training to enhance learning with powerful visual, auditory, and interactive elements.

[Learn more](#) about Pearson's training programs and curricula.

To find out more about NCCER and workforce development work, visit [NCCER's website](#).

