

High-Quality Early Learning: Building the Workforce Pipeline for the Manufacturing Industry

How do we build a new generation of skilled workers to fill the manufacturing industry's skills gap?

A strong manufacturing sector drives economic vitality. Between 2010 and 2020, the U.S. manufacturing industry is projected to have 3.5 million job openings, including more than 400,000 new jobs. Eighty percent of manufacturers surveyed are willing to pay more than the market rates.

However, the U.S. has a serious skills gap: Deloitte projects that more than 2 million of the 3.5 million job openings will go unfilled, due to a lack of skilled workers, including those with STEM (science, technology, engineering and math) skills. To continue to thrive, the manufacturing industry must attract and retain a skilled, educated workforce that can spur and maintain continual innovation.

Start early! Quality early learning programs can help build the future workforce in manufacturing

While most industry efforts to build a skilled workforce address older students, a comprehensive solution to the skills gap requires a focus on education much earlier in life. Disadvantaged children can enter kindergarten already up to 18 months behind their peers — and many of them never catch up, increasing their risk of dropping out of school. A high-quality early learning program — which includes early math and science instruction — lays a solid foundation for a future workforce that has the STEM and other skills the manufacturing industry needs.



More than 2 million of the 3.5 million manufacturing job openings will go unfilled due to a lack of skilled workers, including those with strong science and math skills.

“Early childhood education, including STEM education, is a critical piece to the puzzle for manufacturers to have the skilled workforce they desperately need.”

— Jennifer McNelly, President,
Manufacturing Institute



WHAT CAN BUSINESS LEADERS DO TO TAKE ACTION?

- Join ReadyNation! There are no costs or meetings, only a willingness to consider invitations to speak out, with our support.
- Speak to policymakers and/or the media — we prepare remarks.
- Support local early education programs in your community. Visit www.ReadyNation.org/Ready2Go for ideas.

Research demonstrates that math skills learned in preschool predict success into elementary and high school, in both math and reading. Research on disadvantaged children showed those who had quality early learning were more likely to finish high school, attend college and be employed.

Early education also builds **behavior traits**, including critical thinking, team building and problem solving, that help children become productive employees. A recent study showed that “Kindergartners who share, cooperate and are helpful are more likely to have a college degree and a job 20 years later than children who lack those social skills” — skills that can be taught in preschool. A cost-benefit analysis showed that preschool can return to society an average “profit” of over \$26,000 for every child served.

The bottom line

The future of the manufacturing industry and the economy depends on ensuring that children are prepared for the rigors of postsecondary education and the workforce. Companies can make a big difference by supporting efforts to put children on the right path and lay the foundation for a highly skilled future workforce.

ENDNOTES

- i Carnevale, A.P., Smith, N., & Strohl, J. (2010, June). Recovery: Job Growth and Education Requirements Through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.FR_Web_.pdf
- ii Giffi, C., Dollar, B., Drew, M., McNelly, J., Carrick, G., Gangula, B. (2015). The skills gap in U.S. manufacturing 2015 and beyond. Washington, DC: Deloitte Development LLC.
- iii Barnett, W. S., Tarr, J. E., Esposito Lamy, C., & Frede, E. C. (2001). Fragile lives, shattered dreams: A report on the implementation of preschool education in New Jersey's Abbott Districts. New Brunswick, NJ: National Institute for Early Education Research.
- iv Clements, D. H. & Sarama, J. (2011, August 19). Early Childhood Mathematics Intervention. *Science*, 33 (6045).
- v Washington State Institute for Public Policy (2014, August). Benefit-cost summary State and district early education programs. Olympia, WA: Author. Retrieved from: <http://www.wsipp.wa.gov/BenefitCost/Program/270>.

CORPORATE LEADERSHIP

The Toyota Bornlearning Academy helps parents across Kentucky prepare their children for kindergarten. Parents learn how to use “everyday life” moments to provide learning opportunities for their children.

“Manufacturing companies place a variety of demands on their employees, expecting technical expertise, adaptability, and advanced communication skills. High-quality early childhood education will help build that crucial pipeline from the classroom to the manufacturing workforce.”

— Al Stroucken, Chairman and CEO, Owens-Illinois, Inc.

WHO WE ARE

ReadyNation is a business leader organization working to strengthen business through better policies for children and youth. Our members educate local, state, national, and international policymakers and the media about effective investments that will help business compete in today's global marketplace by helping children get on the right track to succeed in school and in life.

We invite anyone from a business or business organization to join. There are no membership fees, financial obligations, or formal meetings. Our staff support our members to take action, making the best use of their time. Go to www.readynation.org/join-us.

For a list of citations and our funders, see our website.

ReadyNation is a nonprofit membership organization of business leaders that operates under the umbrella of the nonprofit Council for a Strong America.

Add your voice.

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ReadyNation 

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