



Case Study



Years in Business

100+



Number of Employees

1,400



Employees who have taken Tooling U-SME courses

57

Dixon Valve Improves Retention with Apprenticeship Program and Tooling U-SME



INTRODUCTION

Founded in 1916, Dixon Valve & Coupling Co. LLC is a family-owned company that has grown to become a leading global innovator in the hose coupling industry. The company had trained employees in a traditional apprenticeship program but was still experiencing a skills deficit. After consulting with its local Manufacturing Extension Partnership (MEP) and implementing a competency-based apprenticeship program that incorporates Tooling U-SME online classes, Dixon is successfully upskilling its workforce.



ABOUT DIXON

A manufacturer and supplier of hose couplings, valves, dry disconnects, swivels, and other fluid transfer and control products, Dixon has 1,400 employees worldwide. Headquartered in Chestertown, Maryland, the company also has manufacturing divisions in Virginia, Ohio, North Carolina, Wisconsin, Illinois, Texas and Pennsylvania, as well as distribution centers around the globe. Dixon's products are used in numerous industries, including petroleum exploration, refining, transportation, chemical processing, food and beverage, steel, fire protection, construction, mining and manufacturing.



CHALLENGE

Dixon was experiencing a skills gap caused by ineffective workforce retention and a lack of consistent, scheduled, competency-based workforce training.

On-the-job training was the main method the company used to teach employees how to do their jobs, and most of the information imparted to those employees was tribal knowledge.

Dixon implemented a traditional four-year, 8,000-hour, CNC apprenticeship program in the mid-to-late '80s, but it was an honors-based system that didn't provide a consistent way to cross-check employees' claims of expertise.

To graduate the apprenticeship program, employees were required to turn over lists of their assigned, completed tasks to their supervisors. In theory, this verified that the employees could perform the tasks on their lists. In reality, a large number of employees graduated the program without having the skills they claimed to possess.



SOLUTION

In 2016, Dixon began working with the Maryland Manufacturing Extension Partnership (MD MEP) — an independent nonprofit funded by industry and the state of Maryland — to restructure its CNC apprenticeship, improve business performance and narrow the skills gap.

With the MD MEP's help, Dixon transformed its apprenticeship from a traditional 8,000-hour program to a competency-based program — allowing it to be completed in two years instead of four and inspiring a company-wide focus on workforce development.

Through its work with MD MEP, Dixon was the first small- to medium-sized Maryland company to provide a competency-based apprenticeship program for CNC in the state.

To restructure the company's original apprenticeship, MD MEP created a steering committee of subject matter experts to identify specific tasks and mastery levels for the program. It then engaged Dixon employees who knew the requirements to help develop standardized training. The next step was finding a company that could provide online learning for the 144 hours of classroom-related instruction necessary for a competency-based apprenticeship. MD MEP recommended Tooling U-SME due to the flexibility of its courses, which align with Dixon's on-the-job training.

Online Learning

In 2017, Tooling U-SME began providing online instruction for the new apprenticeship program. Employees in the program attend classes during work hours. According to Eric Lemon, manufacturing training manager for Dixon Group Services Inc., most employees pass the classes within two tries.

In addition to using Tooling U-SME classes for apprenticeships, Dixon also uses them for upskilling at the company's Maryland headquarters and as part of a new internal certification program at its North Carolina facility.

"There are so many things I like about Tooling U-SME," says Lemon. "It's a bona fide online learning platform, first of all, so it provides foundational instruction that's approved. And that's a big deal, because it gives credibility to Tooling U-SME, and it also gives learners the understanding that they are learning material that's directly applicable to the way things are done today in the workforce. It's not some archaic thing that's been sitting out there for decades that nobody's bothered to review — it is modern, up-to-date and approved."

Lemon also likes the fact that Tooling U-SME provides general industry education. "Dixon's processes in many cases are very specific to how we do business, and because they're so specific, employees don't always get the opportunity to see how the rest of the industry views them. Tooling U-SME gives our employees perspective on an industry standard, and not just on a company-specific standard."

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Positive Reaction

According to Lemon, the reaction by employees to online coursework has been primarily positive. "We have a pretty diverse work group, and by that I mean not only backgrounds and ethnicities, but also age," he says. "Some folks have been vocal about liking to have a teacher physically in the room, but that's not as prevalent as the folks who like the online training."

On a corporate level, Lemon says Tooling U-SME has been a great partner. "If we have questions, they're quick to answer those questions. If we need to get somebody set up, they're very quick to get that person set up. And if I want to customize the curriculum for an employee, they'll customize it."



Hours of mandatory
online training per
apprenticeship per year

144



Number of classes taken
by employees per year

150-200



Dixon's partnership with MD MEP and Tooling U-SME has positively impacted business performance. "Retention's a big piece of it," says Lemon. "We've retained 90% of our workforce that has touched Tooling U-SME."

Tooling U-SME classes are one part of Dixon employees' career pathways, leading to career growth for a number of workers. And that's a big deal, says Lemon, especially for younger generations. "They want a clear vision and development path for their careers, or they won't stay. It's not just about the money, it's about the opportunity to grow."

Employee Advancement

According to Lemon, every single one of the apprentices who have graduated from Dixon's revised program have gone on to higher job-level responsibilities. "In many cases, they've become process experts for things like reducing machining time and improving efficiencies," he says. "Obviously there are dollars and cents tied to those kinds of projects, and I would say that 80% of the time our current apprentices are engaged in activities that are increasing efficiency, reducing waste and saving the company money."

It's not just younger employees who are benefiting from Dixon's new focus on workforce development. Even the company's most experienced, tenured employees have learned something from Tooling U-SME. "A lot of them have entered into their classwork believing they had already been there and done that, so to speak," says Lemon. "Yet when they sit through these classes, they're finding out they don't know everything they thought they did."

In the end, says Lemon, the combination of competencies and related instruction is helping narrow the skills gap at Dixon. "Now when folks are graduating from our apprenticeship, it's quantifiable, it's verifiable, that they have the skills necessary to possess that certification."



Percentage of employees who have been promoted after training: **100%**



INTO THE FUTURE

According to Lemon, Dixon's implementation of a competency-based CNC apprenticeship program was just the beginning of a continuous improvement process. In January 2022, the company kicked off a competency-based tool and die apprenticeship that also utilizes Tooling U-SME courses. Lemon would like to see the use of Tooling U-SME courses go even further. Not only would he like it to expand to cover areas such as maintenance and welding, he would also like all Dixon employees to have their own Tooling U-SME license — along with prepopulated classes that are directly correlated to their job responsibilities.

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Number of employees currently enrolled in Tooling U-SME:

5

Number of courses passed collectively by employees since inception

- Hundreds

Training Location

- On-site training room with multiple computers and earbuds

To find out how Tooling U-SME can help your company create a world-class training program, call 866.706.8665 or email info@toolingu.com



Tooling U-SME delivers versatile, competency-based learning and development solutions to the manufacturing community, working with more than half of all Fortune 500® manufacturing companies, as well as 600 educational institutions across the country. Tooling U-SME partners with customers to build high performers who help their companies drive quality, profitability, productivity, innovation and employee satisfaction. Working directly with hundreds of high schools, community colleges and universities, Tooling U-SME is able to help prepare the next-generation workforce by providing industry-driven curriculum. A division of SME, a nonprofit that connects all those who are passionate about making things that improve our world, Tooling U-SME can be found at toolingu.com or on Facebook and Twitter.



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