

BALANCING OPERATIONS AND TRAINING

Small Steps Create Big Wins

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If a doctor gives you a long list of how to turn your life around, change can be difficult. Being given 1,000 recommendations makes change seem insurmountable. However, if a doctor offers small changes like ‘drink more water’ or ‘go on walks,’ we can take those steps because they are easy to implement. It’s the same with training. Start small. Remember, even if you aren’t planning to run a marathon, you still start with small steps.”

— Jeannine Kunz, Vice President, Tooling U-SME

START NOW

Manufacturers need training to move their organizations forward, improve quality, meet customer demands and grow. The challenge is that many feel that they can't take their teams out of production because they don't have enough people. So the problems get bigger, and the risks increase.

This execution gap can cause paralysis within an organization. The big picture seems too daunting; nothing is done. Yet the important thing is to buck the status quo and start.

While the best approach is to create an overarching strategy for a sustainable, performance-driven learning program that drives action, you don't have to wait until that is in place before acting. In tandem with the bigger plan, do something small. Then take another small step. These small wins will ultimately add up to more significant progress.

PROVEN BEST PRACTICES

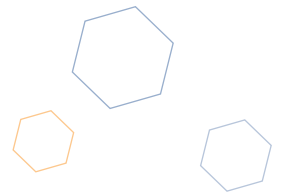
From visiting manufacturers across the country, we know these daily struggles well. We also have the benefit of seeing what is working for companies as they build their workforce so they can continue to thrive.

Investing in your workforce is critical for long-term success. Here we share easy first steps and practical best practices that you can start implementing today.



INSIGHT: Good to Great

We recommend reviewing your learning and development infrastructure to see what you are doing well. While it seems counterintuitive, begin by focusing on areas where you are already seeing success. Then expand. Move from good to great.



You likely have heard the term, “good to great.” The phrase gained prominence in 2001 when Jim Collins published “Good to Great: Why Some Companies Make the Leap and Others Don’t.” The bestselling book examined the performance of good companies over 40 years and studied how 11 of the companies became great. Not surprising, having the right people “on the bus” made the difference. At the time, Collins said, “If I were running a company today, I would have one priority above all others: to acquire as many of the best people as I could. I’d put off everything else to fill my bus ... And the single biggest constraint on the success of my organization is the ability to get and to hang on to enough of the right people.”¹ Even decades later, this strategy remains sound. Building a strong learning and development program can help you find — and keep — the right people on your bus.

A STRATEGIC Approach

To ease manufacturers into boosting their learning and development programs, we recommend a two-pronged approach:

1. Review and evaluate where your company stands compared to high-impact learning organization characteristics.
2. Implement some best practices proven to most quickly bring a strong return on investment.

Remember, start small. While Strategy #1 presents the gold-standard — where you should strive to be — we recommend focusing Strategy #2 on three core areas tied to these desired characteristics to get started. Build from there.

Review and Evaluate High-Impact Learning Organization Characteristics

High-impact learning organizations, those with strong learning foundations, tend to outperform their peers when it comes to productivity, quality, customer service and sales.

Review this list of best-in-class learning and development attributes to assess where your company stands today — and what you need to do to meet your future goals.

1. **Learning Culture:** Does your culture embrace and encourage knowledge sharing and integrate learning into business processes each day?
2. **Profile and Competencies:** Do you use job profiles and associated competencies to allow stakeholders to have productive conversations about skills gaps, performance management, talent acquisition and career development?
3. **Learning Infrastructure:** Do you have mature strategies and systems to distribute learning to all members of the workforce when they need it?
4. **Performance Improvement:** Does the learning function actively pursue opportunities to proactively look at areas to improve human performance through training and non-training solutions?
5. **Just-in-Time Learning:** Do you embrace performance support tools and systems to provide training at the moment it is needed by the workforce?
6. **Strategic Content Alignment:** Do you make strong and efficient business decisions in buying, developing and distributing the right learning content to the right people?
7. **Career Development:** Do you outline career pathways for all job roles to build capability from within?
8. **Community Focus:** Do you share (and gain) knowledge and experience having local groups having a common mission, such as educators, economic development agencies and trade organizations? Do you encourage employees to share their talents through mentoring or advisory roles? Do you offer internships, summer jobs and apprenticeships?
9. **Peer Training:** Do you formalize and structure the on-the-job learning experience to train and qualify workers for work assignments?
10. **Measurement and Evaluation:** Do you use specific measurement tools to validate learning success and organizational capability?

With this big picture in mind, move to Strategy #2 for best practices.

Strategy #2:

IMPLEMENT Best Practices

Now that you are familiar with the characteristics that make up a successful learning culture, let's talk about implementation. Recognizing the heavy lift required to become a high-impact organization, we recommend starting small. Even those who possess many of the key characteristics had to start somewhere.

Tooling U-SME has seen that best practices — tied to the 10 characteristics in Strategy #1 — in the following three areas have the strongest, quickest impact on companies. Consider starting with some or all of these steps that cover both internal and external relationships:

- On-the-Job Training (OJT) — Combat the loss of knowledge from retirements and turnover by focusing on this critical area. Consistency of training increases morale, safety, and productivity while reducing costs. Pursue the OJT tactical tips and you just checked #9 (Peer Training) off your list of desired characteristics.
- Elearning — Easy, quick and relatively inexpensive, elearning is an area where manufacturers tend to start, seeing strong results fairly quickly. Follow the eLearning tactical tips and you've just addressed #6 (Strategic Content Alignment).
- Community — Partnering with local educators and organizations is essential for building a pipeline of workers. This helps meet their needs (i.e., industry relevance, equipment, mentorship/career opportunities) and yours (i.e., well-trained entry-level workers, interns, apprentices). Great job on tackling #8 (Community Focus).

Once you have begun in these three areas, you can decide which other High-impact Learning Organization Characteristics you want to achieve.



5 TACTICAL Steps

- 1** Capture the best practices of veteran employees before 30+ years of institutional knowledge walks out the door. This means validating standard work instructions. Often these are no longer referenced as, over the years, processes may have changed or operators have found better ways. For standardized OJT, this step is critical. It starts by observing the team completing a specific task and documenting any discrepancies in the standard work instructions.
- 2** Define critical tasks for job roles and map standard work to those roles. Start by defining job roles through a task analysis with the assigned operator. Required knowledge and skills should then align with standard work.
- 3** Enlist experienced workers and capture the “why” behind the steps. This is a critical piece if many of your most experienced workers are planning for retirement. Ask these subject matter experts to explain why things are done the way they are, and the consequences if they are not. Make sure you enlist internal experts who are eager to help by passing on their knowledge to the new and future workers.
- 4** Develop mentor guides for consistent teaching experiences. To ensure consistency of training, develop OJT documentation that teaches the steps and explains their purpose. This provides checks and balances for training.
- 5** Develop student reference materials for future performance support. Often operators will train for a while on certain pieces of equipment that they work. Then they are moved to other equipment, maybe for years. When they return to the original equipment, they need retraining to ensure peak performance. Through various tools (e.g., pocket guide, website, augmented reality) managers can keep workers updated on changes to processes and refresh their memories.

Why OJT?

- Captures institutional knowledge
- Standardizes training
- Creates consistency
- Safeguards in case of turnover
- Reduces learning time
- Validates learning
- Increases productivity
- Boosts morale
- Builds efficiency
- Reduces costs



Case Study:

ASAHI KASEI PLASTICS RELIES on OJT for Plant Start-Up

Challenge

Asahi Kasei Plastics was opening a \$30 million plastics plant in Athens, Ala., and needed to quickly onboard and train 45 technicians to ensure they were shop-floor ready.

Solution

Asahi Kasei, known for its innovation and forward thinking, knew that an upfront investment in building a strong learning and development program, including on-the-job training (OJT), would save time and costs in the long run.

Asahi Kasei used a two-pronged training approach, which included:

- Creating a learning and development initiative covering onboarding and an OJT standardized work program. This entailed reviewing, documenting and validating all work instructions. A comprehensive operator manual (OJT Guide) was created.
- Initiating Tooling U-SME's Train-the-Trainer program, with the goal of having one certified trainer per shift.

Result

Based on this success, the company planned to hire another 8 to 10 employees to meet the needs of a new, third production line. A comprehensive standardized work program that covered onboarding and OJT was in place, and strong trainers were leading the way to world-class productivity, consistency and employee development.



WHAT IS THE EXECUTION GAP?

Q. The industry talks about an execution gap, but what exactly does that mean?

A. While manufacturers realize they need to invest in their people by providing continual learning opportunities, often they find it difficult to allocate the time, resources and expense needed to develop a structured plan and implement the training.

There are many challenges. Some say they are busy and can't afford to pull workers off the production floor. Others don't know how to get started implementing a comprehensive training program. Throw in the loss of institutional knowledge when long-time employees retire, and the fast-paced change in technology, this execution gap gets bigger and bigger. Companies that find solutions to these workforce challenges by balancing operations and training will continue to outpace their peers.

Elearning:

7 TACTICAL Steps

Here are seven ways to get started:

- 1** Set program goals and business objectives. Ensure there is team buy-in on goals. Monitor progress performance against your program goals.
- 2** Establish roles and responsibilities for your team. Who is the main stakeholder or administrator? Who schedules opportunities for learners to go off the floor if applicable? Who is in charge of remediation if a learner is struggling?
- 3** Make sure the logistics are taken care of (e.g., computers, devices and schedules). You need to provide an optimal learning environment without distractions.
- 4** Identify some “quick win” topics based on your unique needs. Prioritize these topics to see some early benefits. Looking at data, you will likely find trends around common jobs (e.g., multiple operators having trouble reading a micrometer). Which program that reaches the most people has the most challenges? Start training there.
- 5** Create or find a curriculum that aligns to your goals. Don’t waste time providing training that is not needed. Define the performance goal and use assessments to measure knowledge. Where are people scoring poorly? Through adaptive learning, concentrate on filling the gaps.
- 6** Develop a communication plan for your training initiative. For success, the purpose of the training must be explained company-wide. Employees will feel more engaged when they learn that the assessments and training are for professional development that helps enhance their careers.
- 7** Define metrics and reports to make sure you stay on track. As in all aspects of manufacturing, continuous improvement plays an essential role in training. Programs need ongoing evaluation with mini-goals along the way.

Why elearning?

- Accommodates various learning styles
- Provides access to updated content
- Available anytime, anyplace
- Ease of implementation
- Reduces administrative/instructor time (40-60 percent less than traditional classroom)
- Provides measurement and validation
- Boosts morale as part of career development strategy
- Increases productivity
- Documents compliance training
- Offers cost-effective solution

Case Study:

PARKER HANNIFIN Taps into elearning to Strengthen Workforce

Challenge

Parker Hannifin is a world-class manufacturer of motion and control technologies and systems. Within the Parker Hannifin Cylinder group, approximately 900 employees with an average tenure of 15 years work on made-to-order (MTO) products for a variety of industries. Parker Hannifin approached Tooling U-SME for help with assessments and elearning following its realization that:

- On-the-job training (OJT) was not standardized and risked perpetuating bad habits from one generation of employees to the next.
- Workforce promotion and attrition led to openings, and incoming workers needed to be trained.
- Technical schools to fill this training need were:
 - Few in number
 - Relatively far from the work site
 - Not offering desired online training

Solution

Tooling U-SME assessments and guidance helped Parker Hannifin shape a plan for an effective learning program, including online courses. The assessments focused on basic and CNC skills, including Machining Fundamentals and Intermediate CNC Skills. To make learning accessible, the company:

- Created a quiet training room equipped with six laptops that employees accessed before work, during lunch and after work.
- Allowed employees to use their own computers to access courses from home.
- Compensated employees for participating in the training, whether at home or at work.

Results

Management's consensus is that:

- Plant efficiency increased.
- Employees became part of a problem-solving culture that benefited from their learning, and the application of their new skills and knowledge.

Employee morale has also noticeably improved as a direct result of the training. Employees saw that the company was willing to “put its money where its mouth is” by offering training that was mutually beneficial. Parker Hannifin recognized employees who successfully completed the coursework with awards, which also helped to raise morale.



Community:

5 TACTICAL Steps

Building a pipeline of employees is an essential part of manufacturing success — and local educators are valuable partners. Consider the challenges of educators who may be burdened with outdated curriculum and technology. Your company can reach out to local educators such as a high school Career and Technical Education (CTE) program or community college, and have an honest conversation about their needs and yours. This helps deliver the workforce you need. Here are five ways to get started:

1 Join an advisory board of a local educator. These boards are typically made up of CTE school-level stakeholders, industry, workforce agencies, and postsecondary partners such as technical schools and community colleges. Boards inform and validate the integrity of the program's design and content as it relates to preparing students for college and careers. Boards can provide input for program development, postsecondary training and apprenticeships, and/or employment opportunities for students, professional development for staff and technical assessment reviews.

2 Collaborate on curriculum. Ensure your local schools are delivering employees with the skills you need and want. Work with educators to create lesson plans that cover both classroom and practical education geared toward needed skills and knowledge. Champion standardization of content and a framework built on competencies. Determine ways to help upgrade or supply updated equipment.

3 Provide practical experience to local students by arranging:

- Internships
- Summer jobs
- Apprenticeships
- Career talks, plant tours and job fairs





4 Engage parents and guidance counselors.

These are two big influences on a student's decision to pursue a career in manufacturing. Through on-site events, manufacturers can show parents and counselors how the industry has evolved into innovative advanced technology covering robotics, 3D printing and more. Companies can reinforce that students can build a successful career path with good pay, benefits and lifestyle balance, plus little or no debt. For instance, Youth Apprenticeship Carolina² is a pre-apprenticeship program for South Carolina high school students. It combines high school curriculum and CTE training with critical on-the-job training performed at a local business. Each year, "Signing Day" celebrates the new class of apprentices, which creates excitement for students, families, educators and the community.

5 Tap into organizations such as the SME Education Foundation.

These valuable partners work with schools and manufacturers to help strengthen programs that provide pathways to rewarding careers in manufacturing. They can share experiences from interactions with networks of programs across the country, helping everyone avoid remaking the wheel.

Why Community?

- Creates worker pipeline
- Recruits interns and apprentices
- Enhances image of manufacturing
- Builds goodwill locally
- Matches curriculum to business needs
- Provides career opportunities
- Shares best practices



Case Study:

HONDA OF AMERICA AND LOCAL HIGH SCHOOL Partner Through SME PRIME®

Challenge

Anna High School in Anna, Ohio, wanted to provide career opportunities to its students. Local employer Honda of America Mfg. wanted to build its pipeline.

Solution

SME Education Foundation's Partnership Response In Manufacturing Education (PRIME®) stepped in to help build a tailored pipeline of qualified workers in the community, providing Honda with access to a highly skilled and educated local workforce through the school.

The Anna Honda Plant defined the competencies required for many production roles, and created a

structured training program using Tooling U-SME curriculum. Collaborating with the Anna School District education team, PRIME® brought this same training, starting with two courses, to Anna High School. If students are hired, they make a seamless and quick transition into employees.

Result

This program shows the power of continuity to students, from high school to career, and benefits of partnering with the community.

CASE STUDY





TAKE Action

The execution gap exists when manufacturers have workforce challenges without the corresponding actions to solve them. Companies know they need training to meet customer needs and grow — and yet operational demands on time and appropriate resources often make this strategy challenging, and daunting as well.

To help companies balance operations and training needs, in this report, we provide proven action steps that can boost employee productivity and morale, despite heavy production demands.

By implementing training and development programs tied to the bottom line, your company can outpace the competition and close the execution gap.

While creating an overarching learning and development plan is essential for building and sustaining a high-performing team, quick wins like those described in this report can immediately move you forward and start your organization down a path toward world-class learning and development.

¹ Jim Collins, “Good to Great,” Fast Company, October 2001.
https://www.jimcollins.com/article_topics/articles/good-to-great.html (accessed June 17, 2019).

² “Youth Apprenticeship,” Youth Apprenticeship Carolina, SC Technical College System
<https://www.apprenticeshipcarolina.com/youth-apprenticeship.html> (accessed June 17, 2019).

Tooling U-SME delivers versatile, competency-based learning and development solutions to the manufacturing community, working with thousands of companies, including more than half of all Fortune 500® manufacturers, 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 and technical 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 (facebook.com/toolingu) and Twitter (twitter.com/toolingu).

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