

Build an Apprenticeship Program to Recruit Talent

Ace World Turns Growing Pains into Growing Staff

The next time your company has a job opening for a skilled laborer, wouldn't it be nice to know that you've already got a group of trained candidates ready and waiting?

This is the reality that Ace World Companies has developed for its future. But it wasn't always that way.

Several years ago, Ace World Companies was experiencing growing pains. The Fort Worth, Texas-based company was growing rapidly, supplying American-made, custom-designed material handling solutions to customers in more than 16 industries. As with many high-growth companies, Ace faced a shortage of qualified job candidates. Specifically, the company needed skilled machinists, electricians and millwrights.

"We were having a hard time finding skilled labor," said Helen Morales, human resource manager for Ace. "We knew we wanted a solution where we could teach and grow our employees. So we took a serious look at our recruiting and employee development efforts and said, 'What can we do here?'"

Seeking a Solution to the Talent Shortage

Morales and Ace President Rick Reeves began seeking a long-term solution. They knew that the labor shortage was projected to grow: estimates indicate America will have a shortage of approximately 10 million skilled tradesmen in 2010.

Over the next few years, the company tried three recruiting approaches, including partnerships with local high schools, community colleges and adult education centers. However, these approaches failed, due to a lack of structure and tangible recognition for employees.

Then Ace's leadership discovered the Department of Labor Office of Apprenticeship (OA). This resource helped Ace develop an apprenticeship program for its greatest recruiting need: machinists.

"We developed our apprenticeship program as a strategy to create a seamless pipeline of skilled machinists and develop a career path for our employees to meet our workforce demands," Morales said.

Setting up the Apprenticeship Program

According to Morales, the OA has a pre-structured layout for apprenticeship programs and can guide employers in developing their own set of apprenticeship training standards. These standards cover how the program will be administered, wage scale, subjects to be taught, length of training, apprentice selection criteria and qualifications of the program.

"The Department of Labor helped us implement the apprenticeship program," said Morales. "They talked about future goals with us, outlined the requirements and helped us develop the curriculum."

By working with the OA, Ace's apprenticeship program aligns with federal requirements. Plus, the program's journeymen receive a nationally recognized occupational certificate. This recognition—and the respect that comes with it—is key to the success of the program.

"We found that employees want some kind of public recognition; they want credentials that are identifiable beyond our company. With our program, our employees are becoming machinists. It's more than just on-the-job training," said Morales.

Apprenticeship Program Structure: How It Works

Ace's machinist apprentice program is a four-year program that requires more than 8,500 course hours. It features a combination of classroom studies, on-the-job training and diversification through cross training.

A full-time instructor mentors each apprentice and teaches internal hands-on classes. The apprenticeship program emphasizes the mechanics of the trade, including: gear cutting, machine repair, welding, CNC programming, mechanical assembly, quality measurements and constraints.

In addition to in-house and on-the-job training, Ace's apprenticeship also uses AGMA's education resources: the AGMA online training course, *Fundamentals of Gearing, Inspection & Hobbing* and its training school, *Gear Manufacturing Basic Course*.

Ace pays for all expenses associated with the program, plus time for the apprentices to engage in an additional 2-3 hours of classroom training per week.

"In the beginning we invested a great deal of time, money and energy to develop this program. We have found this to be well worth our efforts," said Ace president Rick Reeves. "The apprenticeship program provides an incentive to attract and retain more highly qualified employees. It also improves productivity and services."

For Ace, program expenses include: tooling, trainer costs, classroom study and supplies, continuing education courses and on-the-job training. All these costs amount to about \$20,000 per apprentice each year.

Morales feels that the program cost is acceptable, considering how expensive it is to recruit an employee. She estimates that bringing a new employee on board can cost as much as \$13,000; and then, an employer still has no guarantees that the new employee is going to work out. In contrast, the Ace apprenticeship program brings in more consistent results.

"The apprenticeship program has allowed us to develop our employees into skilled workers. It's helped attendance. The apprentices know the goals they have, and they want to succeed. As a result, we've been able to retain that talent and motivate them," said Morales.

Apprenticeship Program Benefits

Ace's leadership sees the apprenticeship program as a business solution to ensure the company's future. The availability of the program enhances problem-solving capabilities, guarantees employee versatility, and reduces turnover and absenteeism.

"We are developing skilled workers trained to our standards. They are consistent performers," said Morales. "We feel confident that our machinist apprenticeship program will produce long-term rewards, including a competitive edge that puts us a step ahead of

the rest. Plus, we're lowering our investment in recruitment and reducing our worker compensation costs due to an emphasis on safety training."

In fact, this year Ace has lowered its safety incidents to 0.

Morales credits the apprenticeship program's emphasis on safety, which includes weekly safety tests and elevates current staff journeymen to instructors.

"Our staff journeymen are responsible for teaching the apprentices and signing off on their work, so they make a point of teaching them the right way and serving as examples," said Morales.

In addition to mentoring and extensive training, the apprentices reap increased wages for increased knowledge, skill versatility, clear career paths, improved self-esteem, nationally recognized portable credentials, and an opportunity for college credit and future degrees.

Looking Ahead

At the end of 2008, Ace's first class from its machinist apprenticeship program will graduate. Of the six apprentices that started in the program, two were promoted to other positions in the company. One will graduate this year as a journeyman machinist. Two others will graduate at a later date: they initially left the company and then returned to rejoin the apprenticeship program. One left to pursue other opportunities. In total, Ace has retained 5 of its 6 original apprentices, which is an 83% retention rate.

The company currently has three apprentice groups in progress, and it plans to have 10-12 apprentices in the program at all times. Ace expects to yield 25% from each apprentice class.

Morales has seen a ripple effect from the program.

"We've found that the apprentice program has become a recruiting tool for our company. People are hearing about the apprenticeship program and calling us because they want to learn a trade or skill. Now we've got applicants waiting for when the opportunity presents itself," she said.

Ace's next step is already in motion. Because the machinist program was so successful, the company is in the process of creating an electrical apprenticeship

program. The new program is already creating a buzz through word of mouth, with many people expressing interest in becoming an electrician.

Morales encourages other AGMA members to consider launching their own apprenticeship program.

“When you are thinking about future recruitment for your company, consider an apprenticeship program. The specialized talent that we’re looking for is so limited in the current workforce. Yet, you might have talented people right there in your neighborhood—maybe they just need the opportunity to grow,” she said.

Reeves also highly recommends that his peers pursue the apprenticeship route, and he points out how important involvement is to the success of the program.

“It is important that you’re active in the training,” he said. “Never hesitate to show your passion in a customized apprenticeship program. Your participation and actions will show that you care. And, most importantly express your appreciation to all who are involved.”

For more information on apprenticeship programs, contact the Department of Labor Office of Apprenticeship at <http://www.doleta.gov/OA/> or (202) 693-3812. In addition, most states also have an office that can be located at <http://www.doleta.gov/OA/stateoffices.cfm>.

Sidebar:

Tips for Apprenticeship Success

Suggestions for setting up your own program

The leadership team at Ace World Companies share their wisdom on how to other AGMA members can set up a successful apprenticeship program. Their advice includes:

- Develop the apprenticeship program based on company goals and objectives.
- Consider working with the Department of Labor Office of Apprenticeship. Contact them at <http://www.doleta.gov/OA/> or (202) 693-3812. They can help guide you through the development of your training plan, plus monetary incentives available in some states to assist with program costs.
- Look for a highly motivated instructor with strong mentoring, leadership and technical skills.
- Allow feedback and implement positive change.
- Make learning and on-the-job training fun and eventful.

- Allow all employees to have the opportunity to be involved even if they are not enrolled in the program.
- Remember there will always be turnover.
- Never give up.

Pull-out box

Benefits of an Apprenticeship Program

Skilled workers trained to industry/employer standards to produce quality results
 Increased productivity and knowledge transfer
 Enhance work force retention
 Stable pipeline of new skilled workers (next generation)
 Ongoing safety training to eliminate lost time and reduce workers compensation costs

Benefits to Apprentices

Nationally recognized credentials
 Increased wages for increased knowledge
 Clear career paths
 Improved self-esteem

Benefits to Employers

A business solution for the workforce
 More competent employees
 Consistent performance
 Employee retention
 Lower investment in recruitment
 Improved quality of service and product
 Cross-trained employees that can maintain production

Ideas for Visuals/Charts

CHART options

Apprentice Program by the numbers

8,576 minimum course hours
 576 classroom and text book hours
 8000 hours of hands-on machine work
 4 year term of apprenticeship
 1:1 Ratio of apprentices to journeymen

Or

Schedule of work experience:

Tool crib: 500 hours
 Drills: 500 hours
 Lathe-Engine: 1000 hours
 Milling machine: 800 hours
 Shaper and planer: 100 hours
 Surface grinder: 200 hours

Universal grinder: 200 hours
Cutter grinder: 300 hours
Heat treatment: 100 hours
Bench work: 750 hours
Vertical boring mills: 250 hours
CNC machining & turning centers: 700 hours
Machinery repair: 1800 hours
Gear cutting: 300 hours
Horizontal boring mills: 300 hours
Inspection & confirmation of compliant parts: 200 hours

Related Coursework:

Blueprint Reading for the Industry: 100 hours
Conventional Machinist (phase 1): 132 hours
Conventional Machinist (phase 2): 104 hours
Conventional Machinist (phase 3): 144 hours
CNC Programming: 96 hours

PIE CHART Options

Apprentice Course Hours

8,576 total hours (with pie pieces for 576 classroom/text book hours
8000 hours of hands-on machine work)

Or

Individual Cost Per Year

(see slide 15 from Ace World presentation)

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