

The Fundamentals: How To Begin A Training Program

Written by Raymond L. Atkins CPMM, CMRP, Contributing Editor
Tuesday, 01 July 2008 00:00

Tough economic times or not, no company can afford to ignore or short-change training for the true backbone of its maintenance organization.

If one of your loved ones needed surgery, would you entrust his/her health and safety to a handy, but virtually untrained doctor? If you needed to make a trip by air, would you place your future in the hands of an individual who had good intentions, but no pilot's license? The next time tax season rolls around, are you going to hire an accountant who has done taxes his whole life without really understanding the nuances of the tax code? The answer to these questions is, of course, a resounding no.

We would be foolish, indeed, to engage the services of unprepared professionals such as those described in the opening paragraph. Yet, that's exactly what we, as maintenance managers, do when we send untrained craftspersons out into our processes to perform tasks for which they have been poorly prepared.

At this point in history, the average manufacturing facility routinely operates with technology more sophisticated than what first put men on the moon. In light of ever-increasing complexities on the plant floor, the days of the self-trained millwright are drawing to a close.

We all know the craftspersons I am referring to—*they are the backbone of a maintenance organization*. They are intelligent, quick-witted and good with their hands. They are hard-working, conscientious and accountable. And they are having a harder time each year keeping the plant running because the highly technological nature of today's manufacturing machinery precludes their reliance on intuition, common sense and the ways in which a task always has been performed before.

Nowadays, millwrights and multicrafts must be trained if they—*and your company*—are to succeed. Wanting to, working longer and harder and just being lucky are no longer sufficient strategies.

Beginning a new training program for a maintenance department— *or improving an existing one*—is a large and unwieldy undertaking, especially if you attempt it all at once. It can be a

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thankless, expensive proposition that often is difficult to justify to upper management. The key to succeeding is to prioritize, to tackle what you can when the opportunity arises and to attempt no more at any one time than you can successfully accomplish. Remember the old joke that asks about the best way to eat an elephant; the answer is "one bite at a time." That's the methodology you must employ when initiating a training regimen.

As you consider the following suggestions and techniques, keep in mind that it is better to perform one or two of these methods well than it is to execute all of them poorly. A journey of 10,000 miles begins with the first step. The following list reflects steps in the right direction. Give some serious thought to them.



Evaluations. In order to be able to decide where and how you want to go, you will need to determine where you are now. To do that, you must assess the skill level of your maintenance staff before you determine your training priorities.

Please note that this is a hands-on assessment. The idea is to determine what your craftspersons can actually do as opposed to what they think they know. This will take some time, since each individual will need to demonstrate his or her level of competence based on criteria that you have determined to be important to your plant. If employee "A" does not need to weld, then evaluating for welding skill is a waste of time. If employee "B" is not rated for electrical repairs, then there is no point in having him or her demonstrate the wiring of a motor.

Take care to assure all of your maintenance professionals that the evaluation process is for training purposes only. A loss of the workforce's trust will doom any further efforts to failure. It is best to engage an independent assessor—*such as a local technical college or an independent contractor*—to avoid conflicts of interest, whether real or perceived.



Mentoring. Nationwide, the maintenance workforce is aging, and one by one, the technicians, millwrights and journeymen who have kept industrial America running for the past four decades

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are signing up for their pensions and heading for their favorite fishing spots. The next time you have a maintenance meeting, take a look around the room and ask yourself how many of the faces you see will be there in 10 years. Then imagine how well your operations will run when the knowledge that those people possess retires with them.

Now is the time to put a stop to the brain drain. If your facility is like most, your maintenance personnel work in pairs for safety. One of the most important steps that you as a manager can take is to team the veterans with the rookies, so that the hard-won know-how that the senior millwrights possess can be passed on to the next generation.

Some very useful information on the mentoring process can be found at: www.managementhelp.org/guiding/mentrng/mentrng.htm#anchor4294744861



Apprenticeships. In reality, an apprenticeship is a more formalized form of mentoring. For generations, it was the preferred method of training millwrights and craftspersons. The primary difference between the mentoring and apprenticing approaches is that in an apprenticeship program, promotions and pay raises are often linked to achievement of competencies.

Apprentice programs are an excellent training method, but it is important to have a third-party independent assessment when the time for a skills demonstration rolls around. Otherwise, a strain in the Master-Apprentice relationship can result, particularly if mastery has not been achieved on a training module.

More information on the establishment of an apprenticeship program can be found at: www.dol.gov/jobseekers/apprent.cfm

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Technical College Affiliations. The average maintenance employee generally has some idle time during the course of the work week. One positive alternative to having another coat of paint applied to the handrails is to send the tradesperson to school in a formal setting.

Many technical colleges now have programs of study that are designed to train the new generation of maintenance professionals. The ideal programs are those that combine theoretical "book learning" with hands-on experience. In order for this type of educational experience to work, it must be mandatory—*and the maintenance technician should be paid to attend and successfully complete the classes.* Thus, you need to be sure that the courses you require are conducted during the employee's normal work week.

If you have a large number of employees to train, many technical colleges will agree to provide on-site instruction. Contact the community relations officer at your local institution for more information on this type of training opportunity.



Trainers. For years, maintenance organizations have taken their best millwrights and technicians and promoted them to supervisory, planning and scheduling positions. An alternative to this practice is to create the position of "Trainer."

Similar in function to mentoring, this approach provides one mentor for the entire crew. It is an ideal strategy for smaller organizations whose maintenance professionals do not work in teams in that it still allows for the transfer of knowledge from those that have it to those that need it.



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Factory or Field Representatives. An inexpensive source of knowledge is available to your organization in the form of factory or vendor field representatives. Quite simply, the suppliers of your parts are more than happy to send someone to your organization to instruct your people on the proper installation of those parts. There is generally a commercial announcement or two during these programs, but the training quality is usually quite high.

It is best to schedule these supplier-led sessions when most or all of your employees can be at the presentation. Some examples of representatives who are happy to come out and instruct your people include bearing suppliers, cylinder manufacturers, belting and hose vendors and fastener providers.



Hi-Tech Avenues. Simply sitting your maintenance personnel down in front of a video, CD or computer module does not make a training program. Still, the presentation of information in this manner can have its place in your overall educational agenda.

There are several excellent video courses of study available that cover general topics such as hydraulics, pneumatics, bearing installation, lubrication and the like. The key to this type of knowledge transfer is to always couple it with a session of hands-on training. In other words, after you show the video on how to make a hydraulic hose, take everyone out and have them make a hose to your specifications.

The various branches of the military train their personnel endlessly, but they also conduct maneuvers on a regular basis. This way, the theoretical knowledge that the service members receive can be reinforced by hands-on application of that knowledge. The same type of strategy offers value for your plant.



Reference Libraries. Every maintenance organization should have a reference library dealing with— *at a minimum*—the trades and crafts involved in the upkeep and repair of the manufacturing process, as well as the manuals and specification books for the machinery in that process.

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Specialization. Regardless of how your maintenance organization is compartmentalized, you should have two types of employees if you wish to be successful.

First, all of your personnel need to be good generalists in their fields. Secondly, each person needs to have a specialty on top of their general base of knowledge. Translation: all of your millwrights need to be able to diagnose and repair pneumatic issues, but *one* of them needs to be a fully-trained, factory-certified pneumatic expert, someone who can step in when an unusual situation occurs that requires a deeper level of understanding.

The same is true for the many other specialties or applications in your process, from hydraulics to welding to pipefitting to PLCs. Most manufacturers of industrial components offer formal schooling to their customers, and the enrollment of selected candidates at these factory-sponsored facilities is money well spent.

Making it happen

There are two factors to keep in mind when you undertake the building of an effective training program.

The first is achieving employee buy-in. It is critical that you have the support of your hourly professionals if you wish to change your maintenance reality. They must realize the value of the educational enterprise if it is to be a successful venture.

As you consider the best ways to begin or enhance your training efforts, keep the intended recipients of this education in the loop. If possible, they should participate in the construction of the course of study. If you let them provide input at the development stage, they will have a vested interest in the success and value of the outcome.

The second factor is gaining the support of upper management if you want a more skilled workforce. Training is not a program. It is a process—*one that doesn't expire at the end of the*

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quarter or the current fiscal year and doesn't get suspended when economic times get hard.

Remember, the price of continued improvement of your process is commitment to training by all concerned parties, from the newly-hired maintenance trainee to the president of the company. Moreover, the ultimate goal of excellence in your process can only be attained if that price is paid year-in and year-out.

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