HVACR Training in a COVID and Post-COVID World

BY EUGENE SILBERSTEIN

The effects and memories of 2020 will be deeply engrained in our minds for many years to come. Although many of these memories will reflect the loss of loved ones, economic downturns or the desire for a return to the “good old pre-COVID days”, it is hopeful that we will also remember 2020 as the year when HVACR workforce education experienced a renaissance.

It was on March 11, 2020, that the World Health Organization (WHO) declared a global pandemic. The face-to-face interactions in supply houses, classrooms and with our customers quickly became taboo. HVACR training took on a new look. Trainers, technicians, and students were faced with a unique challenge that required them to utilize new technologies and platforms to deliver and receive training.

What was initially looked upon as a burden, quickly unveiled new and exciting ways to educate the industry. Online training, once thought to only support live training, became more acceptable as a primary source for information delivery. In fact, online content delivery has created high-quality blended learning opportunities for HVACR professionals, even in areas where in-person training has resumed.

Prior to the pandemic, training was offered in a synchronous manner. Schedules were fixed so industry professionals wanting to attend a training session had to choose between taking time off from work or taking time away from their family. The same model held true for schools. Classes were held at specific times on specific days, leaving no room for flexibility. Even after COVID-19 reared its ugly head and HVACR educators moved their training online, they still gravitated to a synchronous, live-event format.

As instructors and educators learned to navigate business conferencing platforms such as Zoom, and WebEx, they also learned how to better train people with these tools. Understanding that those they trained had different schedules, and availability for training, instructors quickly learned that asynchronous learning, where individuals attend sessions when the time is right for them, provided a benefit that could not be otherwise realized.

With pre-recorded training sessions, individuals could “attend” a class whenever the potential for distraction is low and when they are likely to be most engaged by the content. Pre-recorded training allows participants to stop, rewind, and re-watch a session, or part thereof, which can greatly improve an individual’s comprehension.

Learners at all levels are strongly encouraged to use multiple senses to learn and internalize content. Reading, hearing, reciting and, ultimately practicing what they are learning, is the key to becoming well-rounded and successful in this ever-changing industry. These same techniques, which were used almost exclusively in the classroom, are now being integrated into immersive learning training.

Under no circumstances can we truly and accurately verify whether students can apply their knowledge in a real-world, hands-on environment strictly through online learning. Just because a person read about Lasik eye surgery, does not mean they are prepared to conduct it. Similarly, while we can learn about brazing by reading, listening, watching videos, and attending virtual training programs, there must be some mechanism in place to verify that a person can actually braze safely.

This year has brought with it many challenges. However, it has also presented unique and exciting opportunities for innovation, creativity, and growth, especially in education. Many schools are re-thinking how to deliver career and technical education (CTE) programs including HVACR. As they do so, many are finding ways to blend online lectures with low occupancy level laboratory classes. Smaller laboratory classes give students the opportunity to speak directly with instructors more frequently, enhancing the learning experience and building a stronger foundation of the physics and theories necessary for their success as a technician.

When a vaccine for the virus is found, proven and readily available, it is highly unlikely that the delivery of HVACR training will return as we knew it in our pre-COVID world. As we have learned, the majority of content taught in a lecture format can be taught online. Everyone is the benefactor or victim of the training they receive. The pandemic should not become an obstacle to receiving high-quality training. It should become an opportunity for us to re-think our delivery systems and collaborate to improve the quality of technician training in the HVACR industry.

Eugene Silberstein, M.S., B.E.A.P., CMHE is the Director of Technical Education and Standards at ESCO Institute. He holds a Master of Science in Energy and Environmental Science from the State University of New York, and dual bachelor’s degrees. He is a Certified Master HVACR Educator (CMHE) and Building Energy Assessment Professional (BEAP). Mr. Silberstein has worked in education at both the secondary and post-secondary levels, having served as an instructor, professor, program coordinator and department chair. He worked as a field technician, system designer, administrator, consultant and is the author/co-author of several textbooks, including Refrigeration and Air Conditioning Technology.

TRoubleshooting Answer

Although the BAS is the scope of another contractor, I returned out of courtesy to help find and/or solve the issue. I located the BAS panels in the room and noticed that only one of three panels had power. The transformer feeding the panels was powered and outputting the correct voltage. I noticed a two amp glass fuse that had blown. There was a spare fuse inside the box, I replaced it and power was restored.

I attempted several tests to see if I could get the fuse to open again. I ran the tests from the unit I had shut down the previous day at 10:30 a.m. and the fuse remained closed. I advised the building to have their controls tech out to inspect the system. After all, it could be a bare wire that rubs and shorts due to vibration. I am glad I was able to help with the situation.