



In Compliance | NFPA 70E

Getting wired: Rethinking online electrical safety training

BY DEREK VIGSTOL

Which type of electrical training is better: classroom or online?

A recent discussion during the first draft meeting for the 2021 edition of NFPA 70E®, Electrical Safety in the Workplace, made it clear that many in the industry feel that instructor-led training is still the most effective model for learning. There are many benefits to in-person learning that have not been replicated in other types of settings. A key benefit is that students have the ability to ask questions in real time with an instructor in front of them, a feature that is difficult to reproduce in self-paced online learning programs.

On the other hand, benefits exist for students using self-paced online programs that aren't available with instructor-led training. Being able to take this training at the time and place of their own choosing is a major selling point for advocates of online training.

The training landscape in the electrical industry is in a constant state of change. New tools for teaching and new methods of learning are being implemented into classrooms all over the world. While the tried-and-true method of instructor-led classroom training still reigns supreme, major advancements in technology, along with shifts in attitudes, are resulting in significant changes to electrical education.

While the NEC® doesn't specify training, there is a section within NFPA 70E that provides guidance for navigating these changes. Section 110.2(A)(4) specifies that the training required by NFPA 70E be classroom training, on-the-job training (OJT), or a combination of the two. (In this instance, both in-person and online are considered classroom training.) However, neither classroom nor OJT on its own is 100 percent

effective—you'd have a difficult time becoming an electrician, for example, if the only training you received was in a classroom. The electrical industry is made up of many people who learn by getting their hands dirty and actually demonstrating the skills they are learning. It was the model that most of us in the industry went through: Lecture, lab, on-the-job, repeat. And it works very well, which is why it has been around for so long.

But today's technology is changing the game. Augmented reality, virtual reality, remote classrooms, YouTube, and Google have changed the way people consume information and learn. These advancements are enhancing the time-tested instructor-led method of teaching technical topics. Students have the capabilities to attempt tasks in a virtual world or allow information to be delivered at the point where they need it, while they need it. Students can practice complex tasks without being exposed to real hazards or risking damage to expensive equipment.

Even as we consider this potential, it is important to understand that all of this technology is still in its infancy. But if we understand and embrace this shift, we can begin to see the possibilities that exist for electrical training—possibilities that move far beyond the narrated PowerPoint presentation that springs to mind with the term “online learning.”

No matter what kind of training is used, one thing remains the same: employers still have the responsibility to verify the knowledge of their employees. For safe work practice, this is the idea of a “qualified person.” For installations, it might be a license requirement or some other certification. Regardless, workers must possess the knowledge they need to safely perform the task at hand—how they acquire this knowledge is less important than having it and being able to apply it. With different options available for acquiring that knowledge, the due diligence of employers becomes more important as new learning models become more commonplace.

Whether you subscribe to traditional or technology-driven training options, it is reasonable to assume that technological advancements will continue. New features will emerge to answer industry concerns over the growing number of self-paced products. New groups of students will emerge seeking training that has more in common with their video game systems than it does with traditional classroom lectures. How the industry reacts to new advances in training methods will ultimately determine the health and safety of future generations.

DEREK VIGSTOL is an NFPA technical lead, Electrical Tech Services. Top Photograph: Getty Images