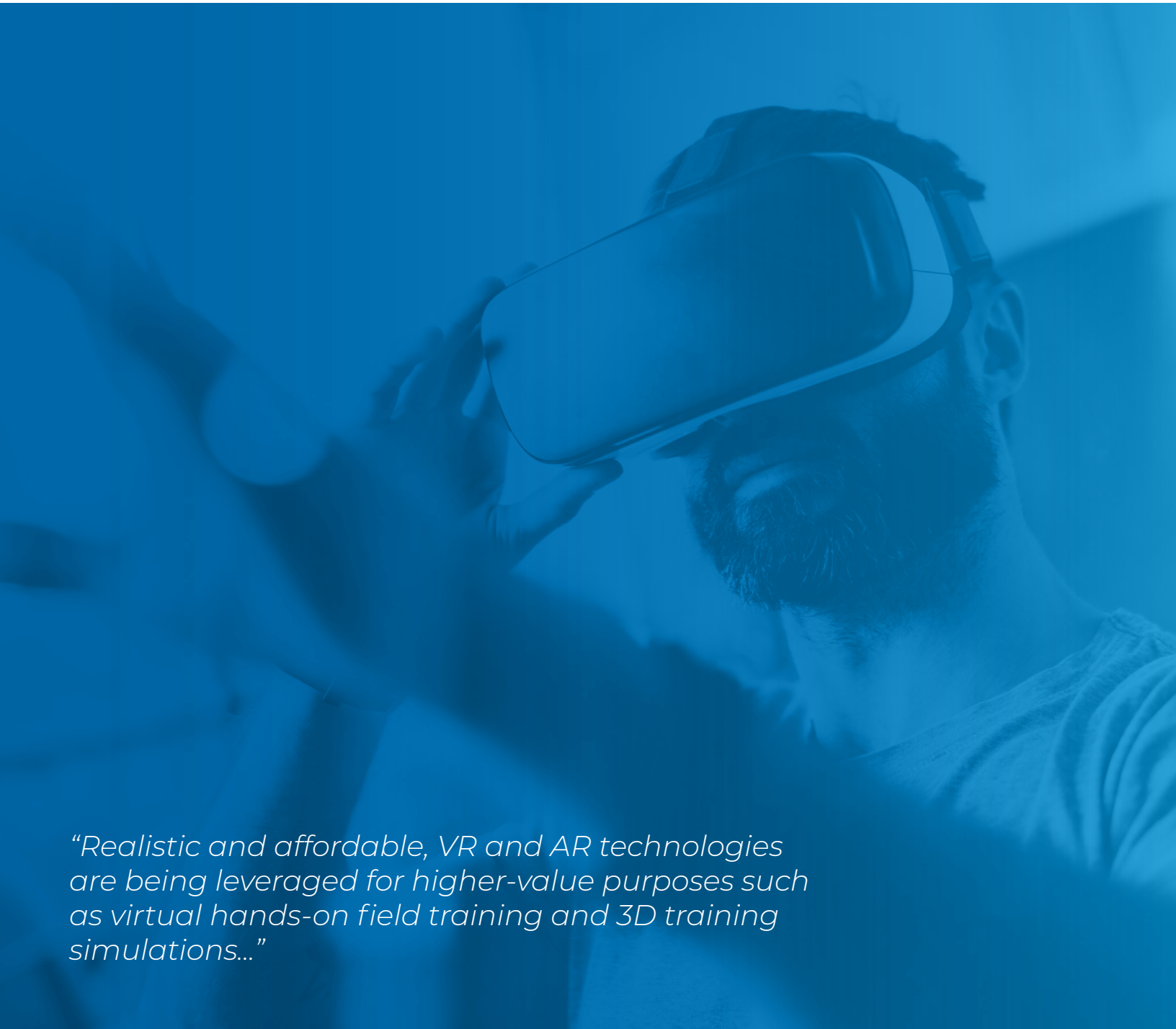
Interplay Learning

IMMERSIVE TRAINING FOR THE NEXT GENERATION OF SKILLED WORKERS

Digital Experiential Learning



"Realistic and affordable, VR and AR technologies are being leveraged for higher-value purposes such as virtual hands-on field training and 3D training simulations..."

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Introduction

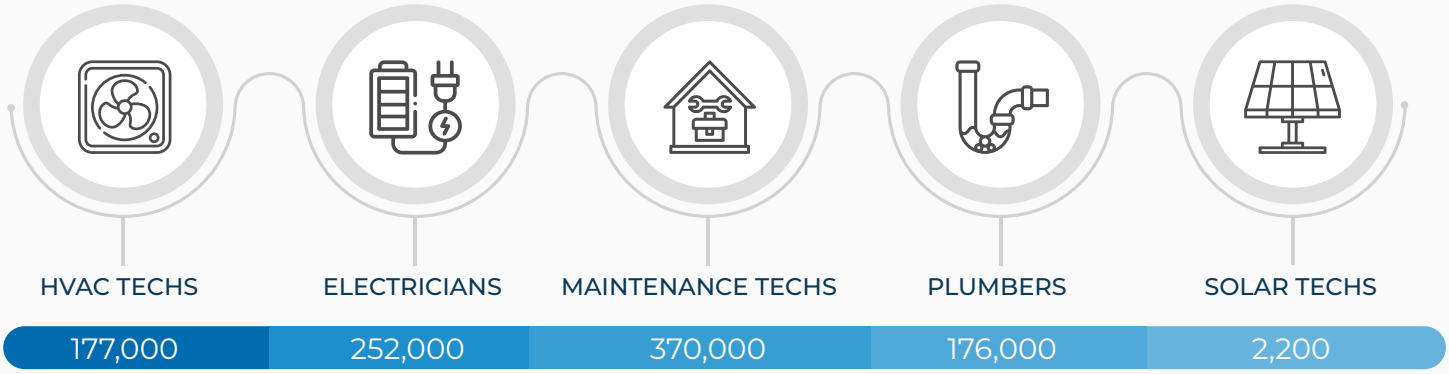
The U.S. continues to be impacted by the lack of available skilled workers that are essential to our everyday life and the growth of our economy. This is not a secret. Cultural shifts in perceptions of skilled labor jobs and the "college at all cost" mentality has resulted in an unprecedented number of open positions in essential, well-paying jobs/ careers such as electricians, HVAC technicians, plumbers and facilities maintenance.

Deloitte estimates that the potential U.S. economic impact of this gap to be $2.5 billion over the next 10 years.

The low U.S. unemployment rate, hovering around 4% in recent years, (prior to COVID-19) has masked the depth of this problem. In 2019, the U.S. Bureau of Labor Statistics (BLS) reported 7.6 million unfilled jobs, while at the same time, 6.5 million people were looking for work. It is clear that a skills mismatch exists and needs to be addressed.

This is especially true in the skilled/ middle-skill jobs. With the majority of the available workforce between the ages 19-39, there must be a focused effort to turn the tables by connecting, engaging and appealing to this demographic.

HELP WANTED



Estimated annual open positions in essential skilled trades through 2028. U.S. Bureau of Labor Statistics

Built for the Industrial Era, Not the Digital Era — America's Apprenticeship Model

For the last 150+ years, the U.S. built the next generation of skilled workers through apprenticeships. Apprenticeships, along with vocational education, were a respectable and reliable way for young workers to train for and master skills that would set them up for a lifelong career and financial stability. The tradition was that experienced workers passed down their knowledge and passion for their craft to the next generation — often to their family members. While not scalable, this served the workforce well, but began to fall out of favor in the last few decades.

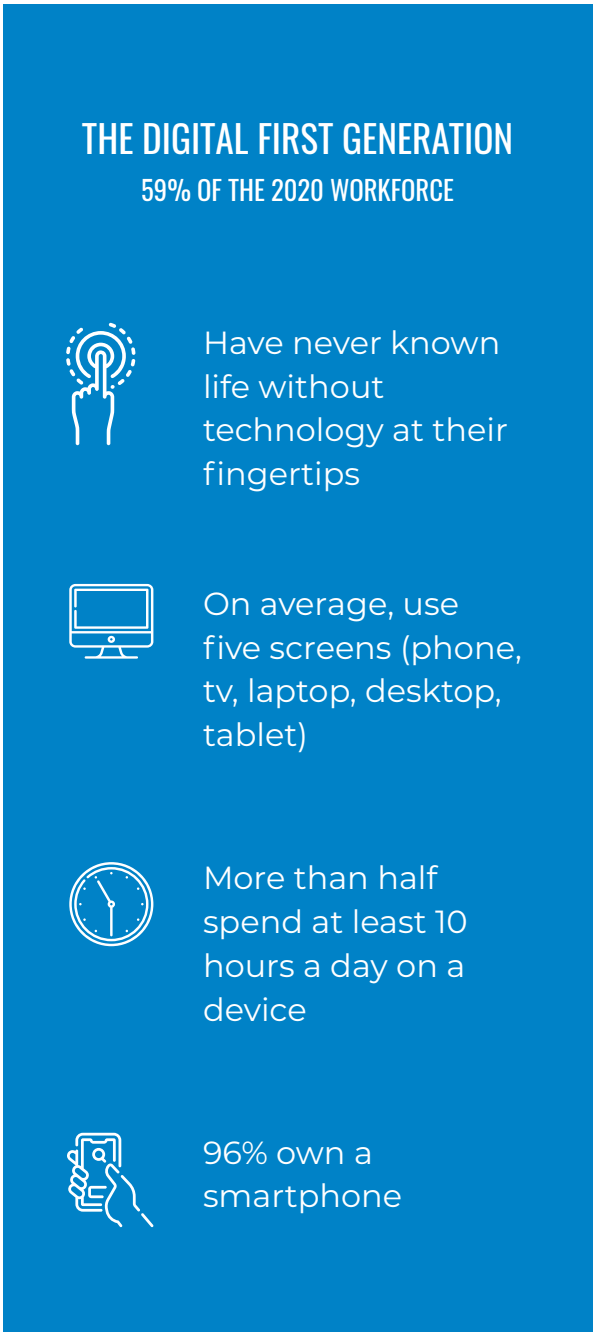
The building boom and population growth of the 1980s and 1990s created a new level of demand for skilled labor. The aging of the existing workforce meant far more people were getting ready to retire without a new generation ready to take their positions. Some have called it the silver tsunami, and in oil and gas, it is called the great crew change. **In 2019, 45% of the skilled workforce was 45-years-old or more, while less than 10% of the skilled workforce was under the age of 24.** Over the next two decades, far more people will leave skilled trade positions than will enter them.

According to the Hudson Institute study of the state of the workforce in North America, **40% of all maintenance workers will retire in the next five years.** When they retire, the skills to keep increasingly technical machinery running goes with them.

Why the lack of new maintenance professionals? The culprit is a lack of relevant training and programs to produce these professionals.

While the demand for skilled labor continues to outpace available candidates, the apprenticeship model adds friction to newcomers, isn't appealing and still doesn't scale. Things move quickly in this world. Businesses demand fast ROI; consumers demand instant response and gratification, and the costs and time required to build and maintain apprenticeship programs make them unappealing to students, educational institutions and organizations nationwide. **Furthermore, continual advancements in the machinery and equipment that needs to be installed and maintained require continuous learning and training to ensure systems run optimally. Honed skills of the workers from the previous decade become out of date as machinery and technologies evolve.**

Apprenticeships will always be valuable, but must be augmented with modern training methods to ensure short-term and long-term success, and provide a scalable model that will evolve with society's needs.



- *Gen Y, or Millennials, were born between 1981 and 1996. They are currently between 24-39 years old.*
- *Gen Z were born between 1995 and 2015. They are currently between 5-25 years old.*

How to Educate the Digital-First Generation

In 2020, 59% of the available U.S. workforce was between the ages of 19-39. Often referred to as the digital natives or the digital-first generation, this population grew up and came of age in a world dominated by technology and instant gratification. They have never known life without technology at their fingertips and take full advantage of this fact. Conditioned to look to technology for answers quickly, they believe it is more efficient to jump in and start clicking, rather than to waste time trying to figure something out by reading instruction manuals. Their way of learning and problem solving is through hands-on experience and trial and error.

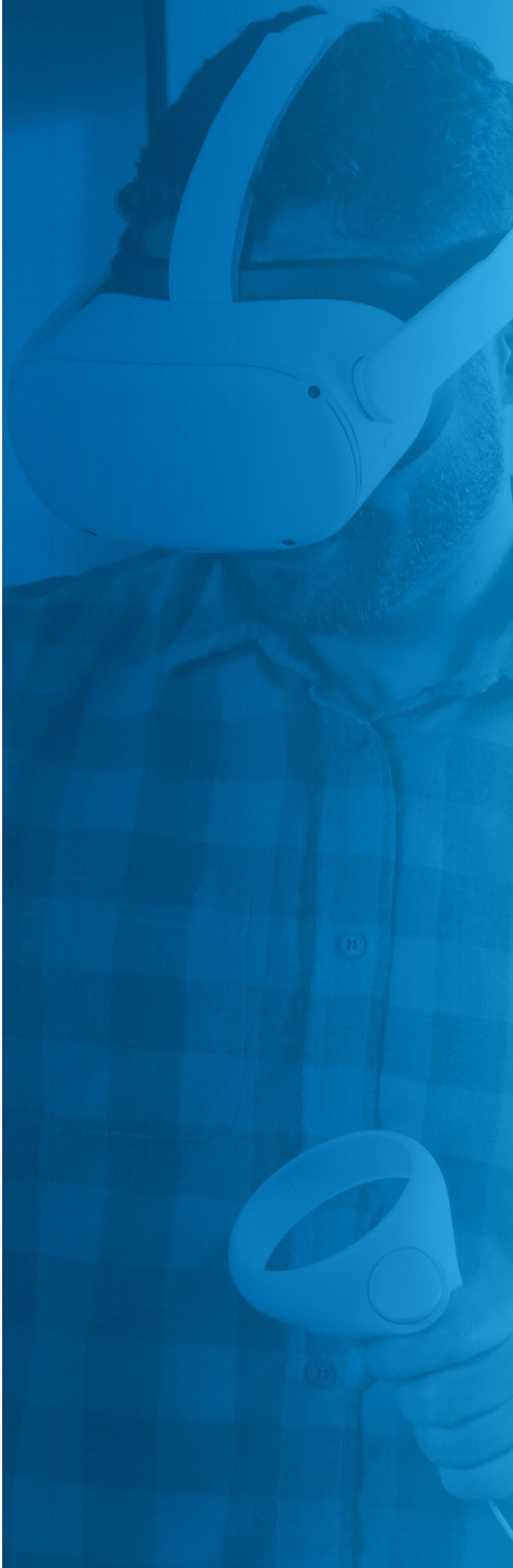
Traditional classroom settings, memorizing manuals and long-term apprenticeships don't provide the level of engagement and immediate gratification that these students are used to and desire. Academia and progressive education leaders have begun incorporating "experiential learning" concepts into curriculums over the last decade. Experiential learning (also known as ExL) is the process of learning through experience. Experiential learning entails a hands-on approach to learning that moves away from the teacher at the front of the room imparting and transferring their knowledge to students. It makes learning an experience that moves beyond the classroom and brings a more involved way of learning.

Digital Experiential Learning — Revolutionizing the Way We Train and Retain Skilled Workers

The virtual reality technologies that took shape in the gaming industry were raw, but engaging. Today's tech has evolved and is much more sophisticated. Realistic and affordable, VR and AR technologies are being leveraged for higher-value purposes such as virtual hands-on field training and 3D training simulations in aviation, healthcare and military settings. Studies have repeatedly confirmed the idea that students are more likely to be motivated and retain what they've learned when they are actively engaged in a learning experience.

Virtual reality can deliver just that — cheaply, safely and from anywhere in the world — recreating lifelike simulations that engage mind and body.

When people are immersed in this kind of simulated experience, it is not only far more engaging, but it is retained and recalled at a much deeper level than reading a manual or watching a video. Incorporating virtual reality and 3D simulations has become a component of curriculum and job training for early adopters, and will continue to be in the decade to come.

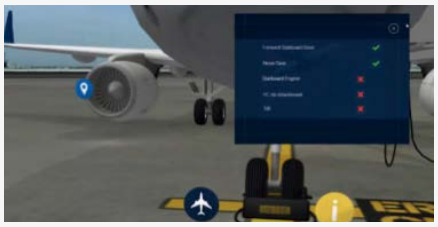


DIGITAL EXPERIENTIAL LEARNING AT WORK

Cost-efficient, effective and safe, VR is being used today in areas where risk is part of the job.

From sniper to tank drivers, virtual reality is changing the way we prepare for war.

Read the article >



Aircraft mechanics use VR to teach technicians repairs. This enables the experts to give instructions and advice when they are not on location.

Read the article >

With a new clinical simulation app developed by a campus-wide team at Yale School of Nursing, a QR code can be placed on a CPR dummy and then present as a wound or injury from a library of options.

Read the article >

Digital Experiential Learning increases retention and engagement. Students get on-demand access to real-world scenarios in a safe environment. Businesses gain unique insights to assess performance and impact.

PwC Study released June 2020
Virtual reality-learners completed training four times faster than those with classroom training.

> A study by the Yale School of Medicine and the Queens University Department of Psychology in Belfast, demonstrates that virtual reality training can transfer technical skills to the operating room environment. The study found that surgeons trained via virtual reality performed 29% faster and made six times fewer mistakes than those trained with conventional methods.

Energizing Skilled Trades Professions

The digital transformation of industries — long over due in skilled trades — is changing business models, improving productivity and making teams more nimble.

New technology waves are the enablers that lead to big productivity gains in business, government and in our daily lives.

We all encounter experiential computing each day. Rather than type in a question to a search engine, you can ask Siri your question and interact with the computer by voice only.

Skilled trades have long needed new energy to help reinvigorate the attraction and enthusiasm for their industries. Connecting with young and future generations is required to attract, engage and retain workers through satisfying and rewarding careers. Virtual technologies are being lauded as the first real tech advancement to impact hands-on trade skills. More than just a set of training videos, Digital Experiential Learning (DExL) platforms that span beginner to master level skills, provide on-demand access — even from the job site — and support individualized goal setting and skills assessments, provide a digital mentor that builds skills, confidence and career momentum.

Digital Experiential Learning mimics in-the-field, hands-on, mentor-led training, compresses time from beginner to mastery and can train hundreds of workers at a time.

It offers a new and engaging way to attract younger generations that is proven to be effective, efficient and safe.

As the advancement of computing technologies continues to change every aspect of business and individual lives, it is also sparking innovations in how people learn, train and interact with their environment.

Younger generations in the U.S. have been brought into a world more interlaced with technology than ever before. The construction and manufacturing industries can meet this new generation halfway by bringing relevant, immersive content to them in the way they want it.

Family Handyman, July 2020

Interplay Learning

To learn more about how DExL improves business, careers and lives, visit www.interplaylearning.com.