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Students learn to manipulate tools in a virtual environment, which can be a cost-effective way to prepare them to transfer the skills to the real-life workplace.

## Virtual reality and the future of workforce development

By Dylan Edgell

**T**here is a widening skills gap in the United States workforce. According to a 2018 Deloitte report, the skills gap in the manufacturing sector alone will leave an estimated 2.4 million positions unfilled in the next decade with a potential economic impact of \$2.5 trillion. There is increased demand for skilled labor in manufacturing, infrastructure and other important industries requiring a specific skill set, and our qualified labor supply is not keeping pace with labor demands.

Traditionally, workforce development training for these roles required physical training facilities with a hefty price tag. With the advent of new technologies, including virtual reality technologies, some of the hurdles of traditional workforce development could be a thing of the past. VR is a tool that is already being utilized for workforce development training and can increase access to training while keeping costs lower.

The Arkansas Office of Skills Development recently partnered with VR training company TRANSFR to offer VR workforce training to 15 K-12 workforce development centers across the state. This is an exciting peek into the potential future of workforce development. I spoke with TRANSFR to learn more about VR workforce development training and how trainees and communities can

benefit from decreased costs and greater accessibility in immersive VR job training.

### Cost benefits

Historically, investments in workforce development have been a costly endeavor for communities looking to provide these educational opportunities. Traditional workforce development training centers could cost up to \$1 million or more depending on the size and scope of the facility. That doesn't include the additional maintenance and utility costs over the course of the life of the building.

In contrast, virtual workforce development training can offer much lower initial costs and maintenance costs. For example, TRANSFR offers industry-specific VR training packages for as little as \$10,000 per industry with an option to purchase their entire set of training industries for \$25,000. The space requirements for this technology are minimal and usually only require a 6-by-6-foot space to complete the training.

### Accessibility

One of the biggest benefits of VR training is the increased accessibility provided by its lower costs and portable equipment. For folks in communities without a traditional training facility, getting training for the job

they want may involve travel and other expenses that can serve as barriers to these opportunities. VR training's mobility offers an opportunity for educational institutions and other workforce development organizations to offer targeted workforce development training tailored to the specific workforce needs of an area. It also allows those who may be searching for a suitable career path a way to "try on" different skilled workforce careers.


The "Be Pro Be Proud" initiative led by the Associated Industries of Arkansas offers a mobile VR workshop that allows high school students to explore skilled labor careers through VR experiences. This exposure to new career opportunities and career pathways in 12 different in-demand professions is another benefit of utilizing VR technologies in workforce development training and outreach.

### Skills transfer

The most important consideration for VR workforce development training is how prepared the trainee is for the job they are preparing for. According to the director of Stanford University's Virtual Human Interaction Lab, Jeremy Bailenson, the sensory immersion facilitated by VR is the key to its effectiveness. "The brain tends to treat the experience as if it were real," he said during a 2018 NPR interview. This leads to VR training's effectiveness

once you move from the virtual world into the actual workplace.

This transfer of skills was borne out in a case study from TRANSFR. According to the study with one of TRANSFR's organizational partners, 93 percent of those who utilized VR training and secured a job were still employed after six months. While this is an isolated case, the job retention rate is impressive and will lead to cost savings by the company and long-term gainful employment for those holding these jobs.

VR workforce development training is just getting started in Arkansas, but the potential impacts of increased accessibility and lower costs make this an attractive option for workforce development in the coming years. Technologies like VR workforce development training will be key for addressing the increasingly large gap between skilled workforce needs and skilled workforce supply. To learn more about TRANSFR, visit [www.transfrvr.com](http://www.transfrvr.com). 



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