Soldiers, surgeons, and astronauts have trained for decades in virtual reality (VR). People learn best by doing, and by getting feedback when they make mistakes, which is why these high-stakes lines of work are natural applications of the medium. But over the past few years, the cost to deploy VR has plummeted, and the technology has expanded into more general use at Fortune 500 corporations, where employees working in industries such as retail, logistics, and customer service are practicing in VR headsets to get better at their jobs.

In this article, I focus on three case studies on employee training: one based on learning physical procedures, one on conversational “soft skills,” and one on corporate culture. All three case studies have shown return on investment, and each involved thousands of employees — a sample size unheard of in academic studies of VR. They were conducted by Strivr, a VR-based immersive learning platform provider. [Disclosure: I cofounded Strivr and the examples given are clients of the company.]

A more efficient way to learn procedures.
There are hundreds of academic studies on procedural training, and the literature is mature enough to include a number of meta-analyses — for example comparing VR surgical training to other techniques. Findings generally support the equivalence of VR training to face-to-face training, the economic savings of VR, or the decreased amount of time needed to train with VR compared to traditional techniques, and larger applications of this academic research echo these trends.

As a recent example, Walmart has trained over a million of its associates in VR. One of the most frequently used modules is “The Pickup Tower,” — which is basically a large kiosk that lets customers pick up online orders. Trainees received step-by-step instruction on how to operate this new machine, with immediate feedback when they made mistakes. Before VR, each person spent an entire day on training inside specifically designated stores, with some hands-on training and some e-learning. VR reduced the training from eight hours to 15 minutes, with no drop in efficacy. Given the fact that all Walmart associates nationwide need to train on The Pickup Tower, VR should return over a million full days of work. To quote Heather Durtschi, senior director of content design and development at Walmart, “You can do the math as to what the savings would be.”

**A safe place to learn soft skills.**
Over the past year, demand has increased for training “soft skills” to improve customer service and managerial skills. These use cases have a foundation in academic work; for example many studies have used VR to teach public speaking. Given how expensive it is to assemble a room full of real people, VR is a game changer in terms of ease and cost. VR shows a unique balance across experiments — it is immersive enough for people to take the training seriously, but also a safe environment where learners are less self-conscious about speaking frankly compared to talking to real people.

For example, Verizon has built and implemented a module to train call-center employees on how to de-escalate a conversation with an upset customer. Trainees get to practice speaking and active listening as a customer conversation becomes increasingly tense.

According to internal data collected by Verizon, VR increased the consistency and effectiveness of the training, and reduced employees’ time training from 10 hours per-person to just 30 minutes. According to Cleo Scott, Director of Global L&D for Verizon Business Services, “As they went back to work and we tracked their progress through the supervisors, the employees were much more confident, because they were more aware of themselves in how they were handling the customer.”

**Sometimes even better than IRL.**
One challenge for companies, especially during Covid-19, is to assimilate new employees into the cultural norms of the organization. While the two case studies discussed above are extensions of previously published research, the notion of training the overall feel and personality of a group is largely without academic precedent. Sprouts Farmers Market, the supermarket chain, relies on employee culture to distinguish their brand, focusing on core values such as “Respect and Serve One Another” and “Embrace Healthy Living.” As Sprouts continues to open new stores and hire across the country, they need to onboard new employees.
Sprouts created a canon of VR experiences designed to exemplify these core values — for example, an employee might teach an anxious mother who just discovered her son is allergic to gluten about how to shop for the new diet, or an employee may decide to deliver a watermelon to an elderly sick customer who can’t drive to pick up his favorite food. Instead of training specific skills, they have implemented what cognitive psychologists call an Exemplar Model, highlighting a number of very salient examples which work in tandem to shed light on an abstract theme. A subset of about 300 of employees were tested on their conceptual understanding of the core values, half of whom did VR and half of whom used PowerPoint training. Forty-eight percent of the trainees who did VR learned all six concepts perfectly, compared to only three percent who used traditional methods. Cindy Chikahisa, VP of Store Operations for Sprouts summed it up: “I’m so grateful we launched this before Covid-19. I can’t imagine hiring thousands of people — which we’ve done over the last few months — and trying to give them a great onboarding experience during a pandemic.”

VR was beginning to catch on before Covid-19, but the global pandemic and the push to remote work is fast-tracking the need for such tools. These three companies are growing despite the crisis, and their need to train employees safely, effectively and efficiently at scale grows as well. VR is the perfect medium for this moment.

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