Revolutionizing the employee learning experience with VR and AR
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Introduction

Articles on Virtual Reality (VR) and Augmented Reality (AR) used to start with mentions of science fiction movies until a few years back. However, both technologies have evolved significantly to become a part of our lives. Now you don't look at VR/AR with surprise anymore, rather you expect it to make your lives easier. If you didn't know, Google Maps now uses AR to enhance navigability and share information.

Interestingly, the two seemingly interconnected technologies have also made a huge impact on learning. From schools to businesses, AR and VR have transformed both teaching and learning. Not only do the technologies improve learning, but it also makes the job of teaching much easier and cost-effective.

The incorporation of VR and AR into learning has created an environment where learners can have a hands-on learning experience. The technologies facilitate learning by doing, even in cases where the approach has been impossible.

The market growth of these technologies is impressive. The market value is expected to reach $18.8 billion by the end of 2020. The value of AR in education can reach $5.3 billion by 2023. At the same time, VR in education is predicted to grow to $640 million.

In this white paper, we will find out how VR and AR are revolutionizing enterprise learning and making way for a better educational experience.
AR or augmented reality is the incorporation of digital information in a video or user environment in real-time. You can use the technology to superimpose sound, videos, images, animations, and more to create a holographic effect.
VR or virtual reality is a technology that creates a virtual environment, putting the user inside the experience. Using VR headsets, viewers can interact and manipulate a 3D world for an experience closer to reality.

Now, let's see how both technologies impact enterprise learning.
Impact of AR and VR in Enterprise Learning

1. Providing Training in a Safe and Affordable Manner

Some industries need to train their employees in the processes and operations before they assume full responsibility. For instance, employees working in power plants or manufacturing units need to know how to operate machines properly on the site. Unless they get a good knowledge of things, they cannot be allowed to take over.

VR and AR can be used to make simulations where training can be safe and free of consequences. Employers can create an exact simulation of their operations with the equipment they use. New employees can then gain expertise through the simulation and experiment to their heart's content. Even if they make mistakes, the consequences will be only be felt in the virtual world of the simulation.

VR simulations put the learner inside the virtual environment. They do not use the mouse or keyboard to navigate or interact. They can find themselves inside a 3D production line where they can try their skills in real time. VR simulations create the feel of navigating the real world effectively for a better practical learning.
2. A Better Way of Practicing Skills

Practicing your skills is the best way to sharpen them. According to studies, we retain much more information when we combine our learning with "doing." In fact, hands-on practice is the best way to retain information compared to discussions, lectures, reading, or even audio-visual learning. It has a retention rate of 75% compared to lectures with 5% retention capabilities.

VR and AR can be the best way to practice and gain experience for employees. You can, say, create a simulation for the nurses in your hospital to practice their skills. Or, you can use a simulation to let your new employees practice the operation of a machine.

This method is used by various industries. Even the aerospace industry uses VR and AR solutions to train pilots and astronauts.
3. Developing Soft Skills and Expertise

VR and AR can help enterprises develop their employees’ soft skills and expertise. Walmart, for example, has been using VR to train their employees to handle customers better. The retail giant even used VR to get employees familiar with dealing with Black Friday customers. Such opportunities help enterprises get employees ready to provide increased customer satisfaction.

Employers can create VR simulations for specific situations the employees are likely to encounter. This makes the employees more comfortable in the actual situations and enables them to provide better service to the customers. Walmart, in this case, uses the Oculus VR headset to impart the training.

These technologies are ideal for letting employees develop soft skills. A company called Talespin became popular for creating a VR demo that taught managers to fire employees. Recently, the company raised $15 million to develop AR and VR learning solutions for enterprise training.

Immersive learning with AR and VR is quite effective. Learning with VR headsets has a recall accuracy of 90.48, according to a study by University of Maryland. Desktop-based learning, on the other hand, has a recall accuracy of 78.57%.
VR and AR is ideal for training employees to handle real-life situations. Currently, some airports are using this technology for airport safety training. International Air Transport Association has long used a VR platform to train employees in on-ground operations. The technique allowed the association to cut back damage to aircraft and equipment and reduce the costs of training.

Some companies are using VR to train employees to handle emergencies. Walmart seems to be a pioneer in VR learning, using the technology to train employees for real-time threats. The organization used VR to train the staff to learn how to control a shooting situation.

The same technique is suitable for emergency training involving other instances like a fire or an earthquake. Employers can create simulations of fire drills and train employees to handle the situation effectively.
5. Enhance the Effectiveness of Learning Materials

VR and AR can make learning more fun and engaging. AR can be used to increase the interactivity of boring text materials. Employers can develop solutions where pointing your phone camera at a specific text of a book leads to additional materials or resources popping up on the users’ screen.

This technique can be used by enterprises to train employees about certain products, services, or solutions.

Research also shows VR teaching to be more effective than traditional methods. According to a study, the VR/AR learners had a recall rate of 80% even after 1-year of training. Traditional learning, on the other hand, has a recall rate of only 20% after 1-week.

Implications like these are vital for enterprises. They can use VR and AR to train and teach employees quickly and in a much better way. The training will also turn out effective, with employees retaining most of what they learned using VR and AR.
VR and AR are ideal for developing soft skills and practice-based learning. However, the same technologies can also help develop technical skills.

The healthcare industry have already started using VR to train doctors and nurses. In one study by Yale University, the VR learners performed surgeries 29% faster and with 6-times less mistakes than the traditional learning group.

The construction industry, too, uses VR and AR for safety training. A study evaluated the effectiveness of immersive learning technologies for safety training. One group received training via VR simulation, and the other used traditional methods. The researchers then tested both groups after training. And one month later, interestingly, the VR group outperformed the other group at the evaluations.

There is no doubt about the effectiveness of VR learning. That's why many enterprises have decided to invest in immersive learning involving VR and AR.
Gamification has been used for a while to train and onboard employees. The approach helps employees learn better and show an increased success rate. VR and AR can now take gamification to a completely new level.

Enterprises can now use VR to develop advanced gamification techniques for improved learning. The process is perfect for getting your employees on board and cut the tiresome process in half. You can even present the best of your company and develop a highly engaging learning experience.

VR and AR have become mainstream in the gaming industry. Slowly, other industries are also opening up and using these technologies for interactive and personalized learning experiences. VR gamification is more preferred because it creates a sense of reality, and helps the employees learn in real time.
AR, on its own, is a big driver of enterprise learning. Employers can use the technology to give real-time instructions to the learners. AR can create augmented simulations where a real-life object transforms into an interactive resource. Employers can superimpose information on factory floor plans, maps, and operation manuals to guide the learners.

This increases the efficiency of teaching and also saves crucial time for trainers.

VR simulations can also help learners assess their own performance. They can view how they performed in the simulation, with added advantages like changing viewing angles. This helps them learn from their mistakes. And as everything happens virtually, the mistakes don’t cost anything to the business.

Assessing your own performance is always a better way to learn. In fact, studies show that learners learn much better when they can see themselves doing something in the simulation.

This also helps save the time of the trainers as the employees can find out their mistakes without supervision. In one auto manufacturing company, 99% trainees who used VR for training were ready to recommend VR training for its efficiency.
Simulations can help employers assess employee performance as they are learning. The trainer can put on his VR headset and analyze each action of the employee. They can keep an eye on how the employees help angry customers or move items on the aisle. Employers can see how adept a trainee nurse is at treating an injured patient or how trainee pilots maneuver a cliff to land on a dirt airstrip.

Online assessments can generate real-time feedback, making it an efficient way of evaluating performance than taking MCQ tests or written questions.
Benefits of VR and AR in Enterprise Learning

Virtual learning can help businesses on many grounds-

- You don’t need a dedicated trainer to teach all the time
- Employees learn better and retain better
- You can reduce risks and damages to equipment and property
- Immersive technologies can personalize learning
- Employees can learn at their own pace
- AR and VR creates a highly engaging and interactive learning experience
- Ideal for getting employees familiar with products
VR-based enterprise training is expected to generate $6 billion by 2022. VR and AR are now being used for teaching in schools, colleges, and workplaces. Most industries have a strong potential for VR learning with advantages like time and cost savings.

Any industry that depends on hands-on learning will find both the technologies quite useful. Mistakes made by new employees will not cost any damage to life, property, or company reputation.

However, the technologies are being used in other industries as well. You can use VR to train a person to make sandwiches, wash clothes, handle toxic chemicals, and more. Top companies are also using VR and AR to prepare employees for handling customers in a much better way.
A huge number of industries have found a use for immersive learning. You can start with a small testing program to see if VR and AR can enhance your training process. If your employees like the approach, you can go for full-scale VR and AR training solution development.

You should also analyze the type of knowledge your employees need. As we saw, VR and simulations are ideal for hands-on learning. However, you may also use these technologies to teach about products, services, and solutions in an interactive way.

Most probably, your teaching needs will be suitably served by immersive learning approaches. If your needs align with that of immersive learning, you can safely traverse the way of VR and AR-based enterprise learning.
Businesses have already started investing in AR and VR technologies to develop cutting-edge learning solutions. In fact, 30% enterprises have identified VR/AR learning as their top priority in the coming years- that records a 66% increase from 2016.

More and more enterprises are walking the way of virtual reality to create well-trained and efficient employees. You too, can take advantage of the virtual trends and implement immersive learning in your organization. It will open up the road to effective learning, better retention, cost-cutting, and lower risks. The reducing cost of equipment like VR headsets will also help enterprises achieve a good ROI. Your employees will also be ready and prepared to handle all situations, gaining experience from simulation-based learning.

In the future, we are going to see mass adoption of immersive learning based on AR and VR.
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