

Reality Plus: How Oculus Go and Virtual Reality Are Changing Our World

Virtual reality, also called VR, is a part of a larger technology called immersive reality.

Immersive reality is where technology enables a person to feel completely or partially in an artificial digital environment.

Virtual reality is the most extreme version of immersive reality, where you feel completely immersed in this alternate environment visually and physically.

To experience VR, you need to wear a headset that blocks out the real world and shows you only the digital world.

Augmented reality, or AR, allows people to layer the actual world, whether live or in a photo, with digital elements.

For example, Pokemon Go is an AR game that gained a huge following, where users with a smart phone walked around and tried to capture Pokemon on camera superimposed on the real world background.

Mixed reality is somewhere in between, where virtual objects look like they are part of the real world.

Some innovative home furnishing companies have an MR feature on their websites where users can upload a photo of their room and they can see what it would look like with a particular sofa, table or lamp sold on the site.

Because virtual reality is not only visual but is also haptic, that is, you feel your body and movement as being in the virtual world too, its applications are practically unlimited.

Medical uses

Dentists may soon start to use virtual reality to reduce patients' anxiety and pain while getting dental procedures.

A recent study fitted dental patients with VR headsets of a coastal scene and a cityscape, and compared their experience of pain to those without a VR headset.

The patients with the soothing coastal scene reported significantly less pain than the other two groups.

Another study of military burn victims showed that patients using VR to play a game called SnowWorld, where they threw snowballs at penguins decreased their pain more than morphine.

An exciting study done by Duke University discovered that VR was extremely effective in helping paraplegics regain some brain functions associated with moving their legs.

Patients wore VR headsets and were asked to move across a soccer field as a soccer player.

All eight of the patients in the study regained some control over their legs and half of them were actually upgraded from full paraplegics to partial paraplegics.

Therapeutic uses

Psychologists have also used VR with patients suffering from anxiety.

Using a belt around the belly that monitors breathing and a VR headset, patients having an anxiety attack are guided through deep breathing exercises and are immersed in a soothing natural setting.

Using VR to expose PTSD patients to digital versions of the traumatizing events and asking them to narrate what is happening helps them to reduce the anxiety associated with the event.

Faculty at the University of Texas in Dallas have created a VR program to help autistic children develop social skills.

The system puts the autistic child in a virtual reality where they encounter different social scenarios and learn how to pick up on social cues and act appropriately.

While using the system, they saw increased brain waves in the patients associated with social understanding.

Education and training

Companies like Walmart are using VR to train their store employees by letting them experience different scenarios like a holiday rush or a mess in an aisle so they can learn the best way to handle these situations.

Some medical schools are using VR to train doctors in different surgical techniques, where mistakes are never fatal.

Business uses

Companies are using VR to reduce travel expenses for meetings and interviews.

Some companies that develop dangerous products are experimenting with using virtual reality to test safety and functionality.

Likewise, car manufacturers can test safety virtually before manufacturing the cars in quantity.

Car companies can also give potential buyers a virtual test drive with a VR headset.

Design

Architects can walk through buildings they haven't built yet in virtual reality, allowing them to see different angles, the look and effect of lighting, lines of sight and shadow.

VR can also show builders, architects and engineers how a building performs from a functionality standpoint, such as how quickly someone is able to exit the building in case of emergency.

Travel planning

When planning your next vacation, there are plenty of unknowns, but with virtual reality, you can find out what to expect before you pay the money to go there.

The Most Popular VR Headsets of 2018

While these specialized and experimental uses of VR hold a lot of promise, today the most common uses of virtual reality are to play immersive games, experience exotic locales like deep sea diving or outer space and other forms of entertainment.

Oculus Rift and Go

Oculus is a well-known VR headset maker and boasts two of the most popular VR headsets, the Rift and the Go.

The Rift is their top of the line product and includes Oculus Touch motion controllers, while Go is their more budget conscious product.

Sony Playstation VR

To augment its gaming system, Sony Playstation integrates with the PlayStation 4 and brings an immersive experience including motion control support to its games.

HTC Vive

The HTC Vive costs more than the other top VR headsets.

It integrates with a PC and has motion controls and whole-room VR.

Samsung Gear VR

At a budget price of less than \$100, the Samsung Gear VR is compatible with the Galaxy S6, S7, S8 and Note 5.

However, some older software is not compatible with the headset and you may have trouble finding apps that work with it.

So whether you are thinking about using virtual reality for entertainment, business, training, medical or therapeutic reasons, it is undeniable that rapidly advancing virtual reality technology will fundamentally change the way we experience and interact with our world.

Virtual reality is able to blend imagination with reality in a unique way, allowing us to stretch the limits of our abilities and creativity and achieve things we never thought possible.

This extension of our range of possible experiences has the ability to shape our brains and change us as human beings.