A man with a beard is wearing a VR headset and sitting at a desk with a laptop. The scene is dimly lit with a blue tint. The text 'VR for Soft Skills Training' is overlaid on the left side of the image.

VR for Soft Skills Training

Dom Barnard, Sophie Thompson

High quality Virtual Reality (VR) equipment has become more affordable during the past few years, leading to its wide scale application in a number of industries. One of the main areas in which VR is being used is in corporate training.

From assembly-line operators to brain surgeons, thousands of people are developing new skills with the help of VR, an increasing number of people are using VR to enhance their soft skills.

The term “soft skills” is applied to skills that are needed for effective social interactions, including customer service, negotiating, sales pitching, presentations, and business networking. These skills are essential for the effective functioning of businesses and are what managers are looking for from prospective employees, according to [research by LinkedIn](#) on 20+ million jobs.

With a rise in automation, being proficient in these difficult-to-imitate human skills will become increasingly important. A study by Manyika et al. (2017) for McKinsey estimates that up to 30% of the hours worked globally could be automated by 2030 and it is the uniquely human skills, or soft skills, which will become ever more valuable in the years to come.

VR provides an affordable, scalable and measurable way for companies to train employees in the transferable skills they need to operate a successful organization.

Limit to traditional training methods

Teaching soft skills is hard because people react and behave differently in similar situations, so traditional teaching methods, which typically follow a ‘one size fits all’ approach, are not the most effective. There is reliance on passive teaching methods, such as lecturing, which can cause those learning to disengage (Capps and Crawford, 2013) as it is difficult to understand the relevance of information when it is isolated from its context (Gee, 2009).

Traditional training does score highly when self-reported but it is unclear whether this learning is applicable to real life and therefore a true return on investment (ROI) for companies.

Practising soft skills in VR can provide a continuous learning experience that’s more authentic to the context of when the skills will be used in the workplace. Being able to practice on demand in realistic, multi-sensory and interesting experiences is unique to VR and can’t be replicated in the same way with traditional teaching methods (Hill and Smith, 2005).

VR creates a strong sense of presence and immersion (Bailenson, 2008), enabling learning in an experiential way in the safety of the virtual world, where there are no real-world consequences to any mistakes made.

When learners can continually practise real-world situations in the safety of the virtual world, they learn through experience and can more easily apply their learning to the workplace – Sophie Thompson



Types of VR for soft skills development

VR can be categorised into several broad categories which can be applied depending on the training requirements, all of which can be used to train soft skills. These categories are as follows:

180 and 360 degree videos

Typically actors are filmed in a room with a 180 or 360 degree camera. This type of VR training is great for complex situations such as empathy training, where human emotions are important. Face rigging and lip syncing technology cannot yet truly simulate emotions on virtual avatars, so this is an effective option when realism is the main objective.

Passive VR - 3 Degrees of Freedom (3-DoF)

Passive VR is good for when the user does not need to move or interact much with the scene. With 3-DoF, the learner's head will be fixed in one location in the virtual scene, even if they move their head in the real world.

With Passive VR, the environment can look more realistic than with 6-DoF, as the audience can be green-screened and the environment highly rendered. This type of VR training could be used for delivering presentations at a large conference.

Interactive VR - 6-DoF

This is a good option for when the user needs to interact with avatars or when objects are close to them in the scene. 6-DoF allows the user to move around in the virtual scene, so the 3D aspect of the environment and avatars is important, especially when they are close to the learner.



How is VR training effective?

Learning through experience

VR enables employees to learn through practical experience, as users are immersed in a world or environment that simulates real-life situations. For a long time, learning through experience has been argued as being the most effective way to learn and studies have shown that it increases the quality of learning and retention by 75-90% (Pérez-Sabater et al., 2011).

By learning through experience, the information becomes more meaningful and learners can relate to it because they are applying the information in their own way, through their responses and behaviour. The 70-20-10 model for learning and development is an experience learning model, created by McCall, Lombardo and Eichinger (1996). This model, based on their research, shows how people learn best in the workplace.

They found that:

- 10% of learning comes from formal educational events, such as training courses.
- 20% of learning comes from interactions with other people through a range of activities, such as mentoring, coaching and group learning. The main benefit of this approach is the support and feedback from peers.
- 70% of learning comes from job-related experience. This type of learning allows people to make decisions, problem solve, discover what skills they have and what skills they need to develop. VR fits into this category because it can simulate job-related experiences and as such, the learner responds in a more authentic, realistic way than in traditional training.

Illusory body ownership

One of the interesting psychological effects that can be exploited using VR is “illusory body ownership”, which is the illusion of owning a part of a body, or an entire body, other than one’s own. This can take a simple form without VR, as in the “rubber hand illusion”, where the participant sees a rubber hand placed in front of her, while her real hand is concealed from view.

The person performing the experiment strokes both hands simultaneously and after a period of time, the participant perceives the fake hand as if it were her own (Botvinick & Cohen 1998). Multisensory perception can influence how we perceive our bodies. If a person holds out a hand, it is generally thought that they know it is there because of information received from muscles and skin but the rubber hand illusion shows that this perception can be overridden by visual information.

Mel Slater found that the rubber band illusion can be replicated with an entirely virtual 3D hand and arm, ‘inducing a feeling of ownership of simulated body parts in a virtual environment’ (Slater et al., 2008). This type of virtual body ownership demonstrates how those learning soft skills in VR can be truly immersed in the experience and feel a level of presence where they can effectively take the form of a virtual avatar and respond similarly to a real-world situation.

Facilitating change in social behaviour

VR has been used to understand the features that form social behaviour (Bailenseon, 2018). This research has highlighted which factors affect social behaviour and the factors unique to VR that have proven to lead to changes in social behaviour, including the ability to inhabit the body of others and their virtual self-body.

Additionally, VR can analyse behavioural data, to provide objective and unique insights into users' social interactions, which can assist in facilitating behavioural change.



Benefits of VR Soft Skills Training

Safe place to develop skills for real-world situations

The safety of the virtual world is the ideal training ground for high-stake situations. Before VR, employees would have to imagine high-risk scenarios and visualise how they would deal with them.

VR removes the need to imagine and instead replaces it with a realistic simulation. It provides an effective learning experience by training people in the most realistic way possible, without the situation actually happening in real life, so that those learning are safe to make mistakes and learn from them.

The cost of making a mistake in the virtual world is nothing compared to the cost of human error in reality. This is especially useful for employees who avoid learning through experience because of anxiety. They can develop their skills and increase their confidence in a safe space, before applying what they have learned to real-life situations.

A PwC report on VR Soft Skills Training found that VR learners were 275% more confident to act on what they learned after training.

Data-driven insights, measure ROI and track progress

VR provides a unique, objective and systematic method for behavioural data capture that gives both the learner and organisation a unique insight into soft skills performance – and crucially for the organisation, a method for tracking ROI.



Participants can easily recognize which areas need to be improved and determine the best learning path and courses to take to build these skills. With VR, those learning and managers can track progress and measure whether their skillset has actually improved. With VR and unlike traditional training methods, soft skills can, for the first time, be quantifiably measured. Participants can receive feedback and be graded on their eye contact, pace of voice and clarity.

We discuss this in more detail, including how we use our Virtual Skills Assessment algorithm, in the Deploying VR for Soft Skills training section.

Practice on demand

The difference between VR and more traditional methods of teaching is that it is difficult to practise many scenarios that require soft skills using e-learning, or in-person training. Realistic learning environments, particularly at the point of need, were difficult to replicate before VR and are missing in traditional teaching methods (Hill and Smith, 2005).

VR environments are highly customised, which enhances experience learning by making practise significantly more realistic, allowing the user to reflect on a more valid performance, as opposed to practising in front of a mirror, or to an audience, 6 months ago.

VR can simulate a range of random actions, to which the user needs to react. An example of this is a media ambush scenario in the VirtualSpeech app, where the user is ambushed coming out of an elevator by press reporters, with cameras flashing and difficult questions being asked - a scenario that is difficult to replicate in the real world.

Scalable, lower cost alternative to in-person training

Other traditional methods, such as hiring actors and in-person training sessions are usually expensive and standards can vary widely. In comparison, companies can be sure that employees are receiving a standardized high-quality level of training, when conducted in VR. The price of VR headsets has fallen substantially in the past few years, so the price of VR training, compared to traditional methods, has decreased.

Feedback to easily identify strengths and weaknesses

Users also know how well they are performing because they can receive instant feedback on their performance, including information about their eye contact, tone, volume and speaking pace, as with VirtualSpeech.

With rapid advances in AI, speech-to-text and text-to-speech technologies, users will eventually be able to have conversations with the avatars and the avatars will react to what is being said in real-time, as would a human colleague.

Increased engagement and retention levels up to 75%

As previously mentioned, VR consists of experience learning, with active recall, which means that a user's memory is being stimulated whilst learning. This is beneficial for long-term retention and is more effective than passive recall, such as re-reading information, or watching videos.

At VirtualSpeech, we have found that employees repeat the VR training scenarios over several months, increasing knowledge retention and helping to overcome the Ebbinghaus Forgetting curve. This repeated learning helps users become comfortable with soft skill scenarios and better able to deal with them in the workplace. Some studies have shown that those trained with VR learnt on average 4X faster than those who learnt with classroom training [[PWC study](#)]



Case Study: Vodafone UK

How VirtualSpeech replicated the Vodafone UK Pavilion in VR for employees to practice presentation skills in their Learning Week and beyond.

Result highlights

- Built a customised virtual environment ready for deployment in 4 weeks
- 91% of learners would like to see more VR training at Vodafone
- 93% of employees would recommend VirtualSpeech to a colleague

Many of the key Vodafone presentations occur in the Vodafone Pavilion, a large conference room venue with a complex layout. The main goal was to re-create this Pavilion in VR so that employees could practice and improve their presentation skills in this room virtually. VirtualSpeech also provided additional VR scenarios to practice different soft skills in.

In VR, the employees can practice in various virtual environments, upload their own presentation slides and notes, receive instant AI-powered feedback, as well as track progress within the app. Managers can also track learner completion and progress, and more easily measure ROI.

Creating the Pavilion

The VirtualSpeech team had around 4 weeks to recreate the pavilion in VR. After visiting the site and taking photos of the venue, the team got to work with designing the initial layout and texturing the scene.

After frequently updating Vodafone with progress of the build and implementing feedback, Vodafone and VirtualSpeech were happy with the final results and the scene was fully rendered. Then, the virtual audience was added into the scene and Vodafone branding added to other areas of the app. The app was then ready for Vodafone employees to start using with their Oculus Go headsets.

Benefits of the VR training experience

- Employees have the opportunity for on-demand, realistic practice in the Vodafone Pavilion before delivering a presentation in the Pavilion in front of a real audience
- Learners receive feedback on their performance, which they can instantly use to improve, tracking their performance each time they practice
- Employees can practice a range of other presentation and public speaking skills in the additional VirtualSpeech VR scenarios provided such as a meeting room, sales pitch, and press conference
- Performance analytics and feedback data provided within the VR app ensures employees know which areas they need to work on, and managers or admins can view learner's areas of strength and improvements as well



Barriers to adoption of VR training

Despite the benefits of using VR for corporate training, there are barriers to its adoption. The short term cost of implementing VR training can be higher than traditional methods because of the price of purchasing headsets. Furthermore, employees must have access to them.

It is not just the purchasing of hardware that needs to be considered when balancing the budget. Integrating VR training with your existing Learning Management System (LMS) and customising the training for your particular brand can both add to the cost of uptake.

With such a new evolving technology, it is essential that ROI is higher than for traditional training methods. The main reason for introducing VR training is to benefit employees but there is a risk of employee backlash, especially from older employees who tend to be more reluctant to adopt new technologies.

However, feedback from employees we have trained using our VR courses has shown there is no significant difference in uptake amongst different age groups - both younger and older employees are as likely to embrace the technology and to find it beneficial. As more companies introduce VR to their training catalogue and report positive results, cautious managers will be more inclined to adopt VR and it is likely that VR training will become standard.

As younger millennials and the first years of Gen Z enter the workforce, companies will have to adapt to their behaviour, working styles and preferred methods of learning - which are likely to be technology-focused and geographically dispersed.

Best practices for deploying VR soft skills training programs

There are several key areas you need to think about when deploying an immersive learning program, including how to allocate resources, integrate with existing training, the logistics of rolling out the program, and how to increase learner adoption.

Finding a need and setting objectives

The first step is identifying an important need within your organisation that can be effectively addressed and benefit from an immersive training program. Ideally, this need has a measurable goal, which can be tracked with analytics and data from the training so you can track ROI and success of the project.

When thinking about the outcome of an immersive training program, you should consider tangible objectives such as cost savings, scalability, and learner success, as well as less tangible ones such as confidence, engagement and repeatability.

Rollout and adoption

The time frame for rolling out immersive training depends on your learning objectives and usage goals, internal buy-in, how many learners you have, and specific use cases. You want to capture the right amount of training data to demonstrate real impact.

Rollout and adoption is about achieving your rollout plan and gathering immersive training data. You can only assess the impact of immersive learning if you have the right data for your organisation and enough of it. By generating excitement and wide adoption, you will have built an excellent training data set and be able to measure the success of the program with more accurate results.

Focus first on a small number of stakeholders for whom the training topic area is mission-critical as they will be your biggest supporters. This will speed up buy-in, facilitate ad-hoc deployment and greatly help with the collection of feedback, and subsequently larger rollout.

Location of participants

If you're rolling out the program to a large group of people who are widely distributed, you'll need to plan for having VR headsets in each location. These headsets can be shared amongst employees or students, so you don't need a 1-to-1 match of users and headsets.



When deploying the program using shared headsets, it's important to ensure adequate cleaning practices between each learner. This only takes a few minutes and will ensure the health and hygiene of the headsets. Read more about this in the hygiene section below.

Integrate with existing training material

To get the most out of an immersive learning program, integrate it with your curriculum and platforms already in place for teaching, training, or upskilling. This will help the transition to VR training as it becomes a supplementary solution to more familiar learning methods.

For example, you can combine existing e-learning courses with immersive training, so that learners can practice what they are being taught in the e-learning material. Learners typically don't want to spend too long in immersive headsets, so the combination of learning core content through regular e-learning channels such as online videos and quizzes, before practicing these in VR, is a powerful combination.

Immersive learning programs can be integrated with a LMS, where data analytics from the immersive training session is sent to your organisation's LMS, such as Cornerstone, and stored amongst other learner data.

Allocating resources and cost

Organisations who implement immersive training early will have an advantage compared to their competitors, as their workforce efficiency in skills trained with VR is likely to increase significantly.

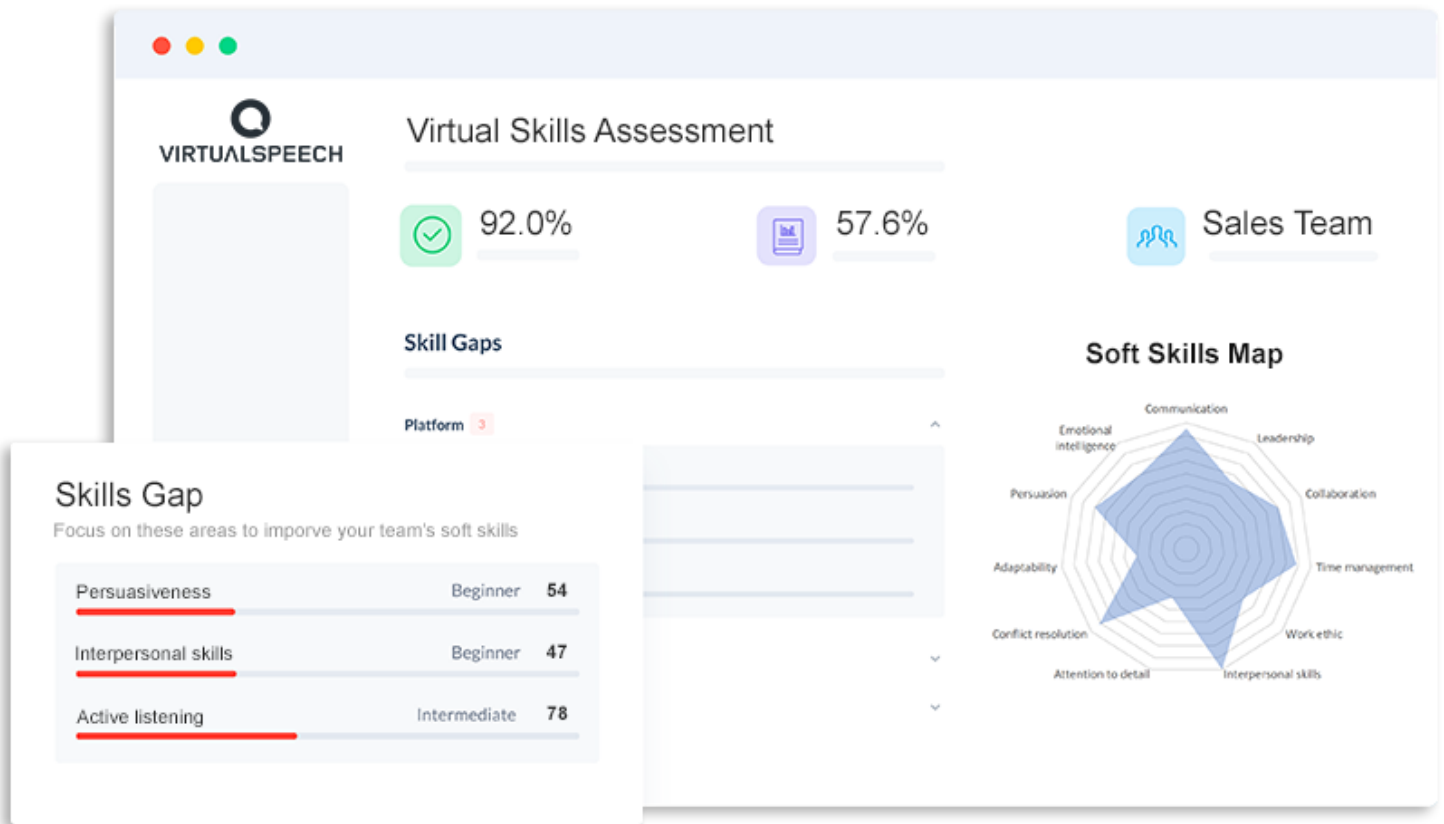
However, the first year of a new immersive program can be more expensive than traditional e-learning, due to the initial hardware costs (VR headsets) and any customisation requirements. But this varies between organisation and seniority level - if, for example, you would normally spend \$500 on a flight and accommodation alone for training, and instead you spent that on a VR headset and software, then actually you could even save money from the first year.

Employee adaptation to new technology

As with any new technology or change, there will be a transition period to get comfortable with new formats and platforms, and Immersive training technology is no exception. There is a risk of user backlash, especially from older learners who tend to be less enthusiastic to adopt new technologies.

From our personal experience, we were somewhat surprised to find little variation across age groups wanting to use VR for learning, and that could be partly due to our blended approach with more traditional forms of learning.

We recommend that immersive training should be made optional, where people can opt-in to take the training if they are looking for an innovative alternative, much in the same way organizations have a catalogue of online and in-person training courses.



Reporting and soft skill assessment

VR provides learners with real-time feedback to accelerate learning and identify areas that need improving. With this data, organizations can easily track ROI with quantitative data.

VirtualSpeech training provides users with feedback on their performance in the virtual world, using built-in speech analysis tools powered by AI. This feedback includes eye contact performance, pace of speaking, hesitation words used and tone. All this data, as well as results in quizzes, completing scenario goals, branched scenario results, and more, provide data for the Virtual Skills Assessment tool.

Virtual Skills Assessment

A unique, objective and systematic method for tracking soft skills performance in VR. Key benefits include:

- Managers can quantify and measure their team's ability across multiple soft skills
- Identify strengths and weakness, with scores provided for the soft skills
- Accelerate skill growth by assigning suitable courses to employees
- Data-driven approach to VR learning and skills management

Learn more about [Virtual Skills Assessment](#).

The future of VR in corporate training

Companies are already implementing VR as a tool for corporate training. Managers are realising the long-term reduction in cost and increased ROI in respect of engagement, safety and retention of training, compared to traditional methods of training soft skills, which don't scale well.

As the VR industry develops and more becomes possible in a virtual setting, it is likely that more training will be done in VR and it will soon become a staple of employee training. Companies which are early to adopt the technology will have a huge advantage over their competitors.

Contact

Contact us at info@virtualspeech.com for a demo of our VR soft skills training.

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