bodyswaps

Transforming soft skills training with immersive learning

VIVE X   Innovate UK FUNDED   VR 2019 SHORTLIST   BEST PROJECT FOR EDUCATION AND TRAINING   VIRTUALITY GRAND PRIX   iSG START-UP CHALLENGE WINNER 2019

Content

Foreword

Academic research and case studies have firmly established VR as a powerful tool to accelerate behavioral change. And so, in 2020, the conversation around the use of immersive technologies for soft skills training has moved from "Why" to "How".

Now, with the COVID-19 crisis impacting the L&D landscape, the pace of change has dramatically accelerated. In an increasingly decentralised and automated world, soft skills training is a strategic imperative to guarantee operational efficiency. But in this uncertain economic context, soft skills training budgets are likely to shrink and shift. Organisations are navigating away from costly, carbon-hungry and potentially unsafe face-to-face approaches whilst being cautious about the pitfalls of an elearning content deluge and increasing 'Zoom fatigue'. Instead, to future-proof their L&D strategy, smart organisations are exploring new ways to deliver impactful remote learning whilst justifying every penny spent by measurable results.

In this new world, VR becomes the best medium to deliver immersive learning experiences remotely. But how can organisations deploy VR, cost-efficiently and at scale? What's the safest path from idea to integration?

This whitepaper explores the most frequent questions learning leaders have when considering using immersive learning for soft skills training.

We hope you will find enough insights in there to transform your curiosity into action.

92%

of executives say that soft skills have become equally or more important than technical skills.(1)

The challenge of deploying soft skills training at scale

Social media, AI, #metoo, the Covid-19 etc. The past decade has seen radical technological and societal transformations impacting the World of Work.

As LinkedIn 2019 Global Talent Trend puts it: "**the big issue organisations will face in the coming years is about people**: how we find and develop soft skills, how we create fairness and transparency, and how we make the workplace more flexible, humane, and honest." (3)

In an increasingly automated economy, **performance is becoming a function of human behavior**. And therefore HR departments have inherited a mission-critical remit: transforming workplace behavior, at scale, and cost-efficiently, to lead their organisation successfully into the 4th Industrial Revolution.

This can be broken down into 4 key objectives:

- Upskilling employees' soft skills at all levels
- Delivering lifelong learning strategies to win the war for talent
- Transforming workplace behavior to accommodate a global, remote, diverse workforce
- Inform organisational strategy with relevant people data

> "You cannot continuously improve interdependent systems and processes until you progressively perfect interdependent, interpersonal relationships." (4)

Stephen Covey, Author

Soft skills can broadly be defined as a collection of one's social and communication abilities. As an expression of emotional intelligence, soft skills underpin how we interact with others in any given situation. **Effective soft skills training therefore requires deepening the participant's understanding of organisational contexts and individual relationships, and the effect of their specific actions in that context**.

That's why face-to-face interventions, from coaching to roleplay-based workshops are the gold standard of behavioural training - enabling behavioral change through practice and self-reflection. But such programmes are expensive, logistically taxing in an increasingly remote working world and often poorly measured. Hence why these are difficult to scale across whole organisations.

On the other end of the learning technology spectrum, eLearning and mobile learning bring scalability and personalisation. But eLearning is a mostly passive delivery approach that focuses on optimising knowledge acquisition. It quasi-systematically fails to engage on an emotional level, to allow learners to practice, self-reflect and build the skills and confidence to transform their behavior in real life.

In other words, forced to choose between the costs and impracticality of instructor-led soft skills training and the relative inefficacy of eLearning, organisations are looking for a cost-efficient and measurable learning technology to deploy impactful programmes at scale.

"Machines are going to get very good at being machines, so we need to get very good at being human." (5)

Nicole Bradfield, Partner, Within People

The value proposition of immersive training for soft skills

Immersive learning is not a new value proposition.

Flight simulators for commercial pilot training have been around since the 1950s. They remain immensely successful by offering a faster, safer, more measurable and more cost-efficient alternative to their real-life equivalent.

Similarly, immersive soft skills simulations, delivered via new affordable VR headsets, promise to equip organisations with a better tool to develop their workforce's social and communication abilities. Employees can now practice workplace scenarios, in a safe space, at the point of need. And, through data, organisations can finally generate reliable soft skills competency maps of their workforce.

In a nutshell, immersive soft skills learning combines the benefits of role-play based training with the scalability, consistency and measurability of a digital solution.

Key benefits of **immersive learning**

Learning performance

Research demonstrates that immersive, interactive and reflexive VR learning makes soft skills acquisition faster than with existing alternatives.

This translates into **faster time to competency, improved company culture, lower attrition rate and ultimately better operational performance.**

ROI

Faster training and reduced reliance on face-to-face interventions decreases lost value linked to employee time, facilitation costs as well as travel and accommodation spend.

Ultimately, learners spend **less but better-focused time training from their location.**

A Study - The Effectiveness of Virtual Reality Soft Skills Training in the Enterprise

4x
faster than classroom training on average

275%
more confident to act on what they learned after training

375
the numbers of learners after which deploying v-learning becomes more cost-efficient than classroom learning

An overview of the research on embodied virtual reality and behavioral change

Academic researchers have been studying the behavioral effects of Embodied Virtual Reality (EVR) for over a decade. The results firmly position EVR as a powerful medium for implicit learning and driver of sustained behavioral change.

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VR boosts engagement and improves understanding and memorability

Even at its most basic level, VR improves the learner's engagement as it captures 100% of their audio-visual input. Moreover, the spatial and interactive representation of content improves understanding and memorability.

A 2018 study by the University of Warwick compared the learning performance of students confronted with the same content in text, video and VR. It concluded that "Virtual reality (VR) is the most engaging and emotionally positive learning method. VR shows great potential to supplement or replace traditional learning methods and create new experiences in the classroom". (6)

VR creates the illusion of presence and impacts one's implicit biases

In embodied VR experiences, learners are placed in simulations where they have their own virtual body, synchronised with their real body movements. Those virtual bodies are often of a different age, gender or race than the user's.

Research has shown that an illusion of virtual body ownership is created. In other words, learners subconsciously accept the virtual body as their own, which affects their implicit biases and behavior.

A 2018 study led by Natalie Salmanovitz found, that people who embodied a Black avatar produced significantly lower implicit racial bias and were more conservative when evaluating the guilt of Black defendants in mock legal scenarios. (7)

Perspective-taking VR can foster sustained attitude change towards other groups

Embodied virtual reality, as a perspective-taking exercise, has a higher and longer-lasting impact in terms of behavioral change than traditional or computer-based methods. This change in attitude towards the group of individuals of which the perspective was taken can happen at a subconscious level.

A recent study published by a team at Stanford University looking at attitudes towards homelessness showed that a significantly higher number of participants experiencing homelessness in VR signed a petition supporting affordable housing for the homeless, despite little differences between the groups when it came to self-reported measures of empathy. (8)
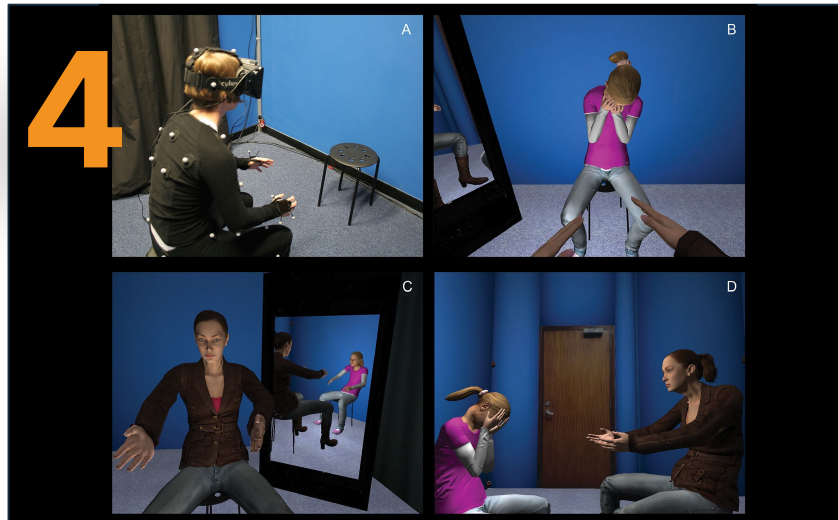
Body-swapping in VR drives self-awareness and can improve psychological well-being

The body-swapping VR format, first developed by Mel Slater and his team in 2014, is an advanced form of embodied VR. It allows users to essentially converse with themselves: users embody an avatar and speak with their own voice before swapping body with another avatar to listen back and answer to themselves from a new perspective.

When used with participants who had high levels of self-criticism, a body-swapping experience of comforting a crying child resulted in reduced depressive symptoms a month after the therapy for the majority of participants, some of whom experienced a clinically significant drop in depression severity. (9)

Introducing a learning design framework for immersive soft skills training

Immersive learning design for behavioral training is a relatively nascent field with very few established design principles. **The following framework is a first attempt at developing a form of playbook to guide the creation of impactful soft skills training in virtual reality**. Like any framework, it calls for discussion and improvement and we hope this can be the start of fruitful conversations between the learning design and immersive technology worlds.

Developed in collaboration with Egle Vinauskaite, a learning designer and Human Development and Psychology graduate from Harvard University, this framework is focussed specifically on developing soft skills in an immersive environment. Based on the latest research and best practice in the fields of adult learning and virtual reality, it combines evidence-based principles and ethical design practices, all the while taking full advantage of the immersive medium.
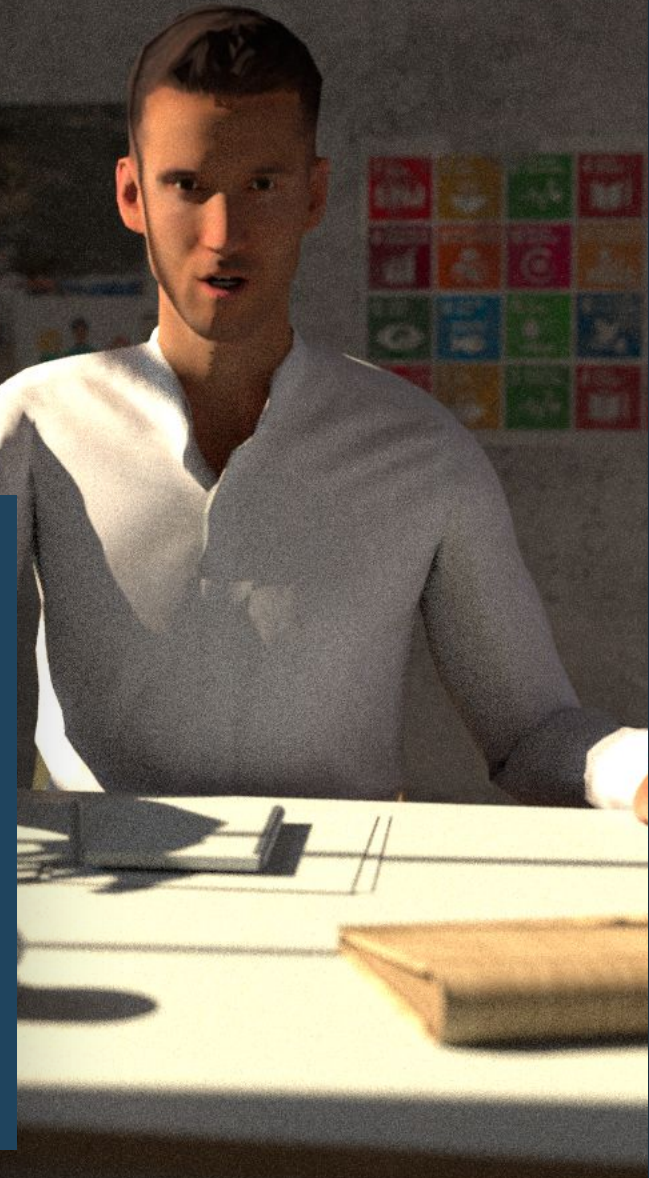
Immersive soft skills training design

Learning Design Principles

SELF-REFLECTION
Reflection is the secret ingredient in learning from experience. It activates several key learning processes at once and bridges the ever-elusive gap between training and work.

AFFECT
Emotional resonance is one of the primary drivers of engagement and retention. Living through an experience makes learning personally meaningful - and truly enduring.

APPLICATION
Performance is more powerful than consuming content. Practice with well-timed feedback corrects misconceptions and helps embed new skills, all ready for recall at the point of need.

ADAPTIVE PRACTICE
True learning is necessarily effortful. Variations in practice, especially if they adapt to one's prior performance, increase cognitive effort and create a more complex, nuanced mastery of a skill.
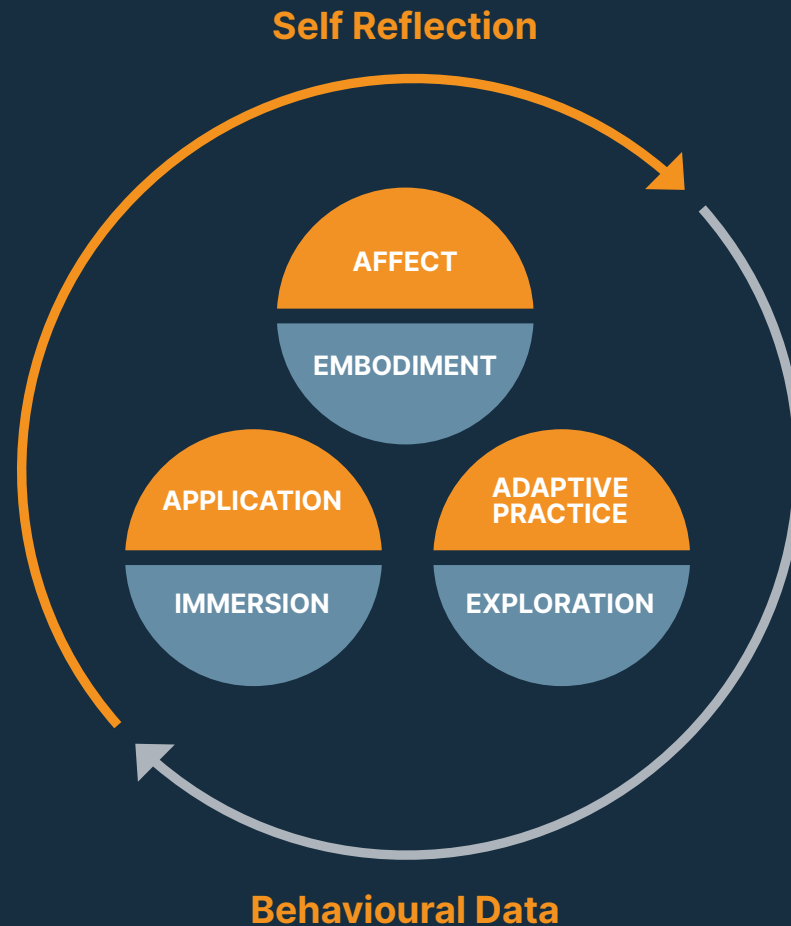
VR Design Principles

DATA
Collection of VR and AI-enabled data points throughout the experience helps provide meaningful feedback and create unique learner paths.

EMBODIMENT
The illusion of presence takes learning personalisation to another level through visceral, lived-in experiences.

IMMERSION
High fidelity immersive environments enable learners to practice skills in situations that closely resemble the look and feel of real life.

EXPLORATION
Thoughtful, dynamic scenarios encourage us to explore realistic consequences of one's actions time and again.

Self Reflection

AFFECT
EMBODIMENT
APPLICATION
ADAPTIVE PRACTICE
IMMERSION
EXPLORATION

Behavioural Data

Applying the learning framework to BODYSWAPS

Embodiment + Affect = Emotional Engagement

In BODYSWAPS®, the learner has a virtual body and participates in a simulated social interaction with a virtual human. Being embodied in a virtual character allows for an emotional, personal and highly memorable experience for each individual, informing their responses and giving learning personalisation a new meaning.

Exploration + Adaptive Practice = Psychological Safety

BODYSWAPS® simulations are designed to be experienced individually without other participants or external evaluation. The psychological safety awarded by virtual environments encourages exploration without fear of failure, leading to repetition and variations in practice that embed information in new, more durable ways.

Immersion + Application = Real-play not Roleplay

In BODYSWAPS®' scenarios, professional actors have been motion-captured to give life to virtual humans that talk, move and react like real people. Moreover, the learners get to interact with those virtual humans using their own voice. The combination of social presence and participation unleashes the benefits of hands-on practice usually reserved for face-to-face roleplaying.

Data + Reflection = Self-coaching

BODYSWAPS®' analytics dashboard leverages behavioral and semantic data to provide highly personalised real-time feedback. This encourages self-awareness and enables powerful moments of reflection. Moreover, by aggregating behavioral data at scale, BODYSWAPS® provides organisations with a real-time map of their workforce's competency around a specific topic .

Deploying VR headsets in your organisation

Designing great content is only the first part of the challenge. Until immersive learning becomes standard in soft skills training, it is recommended to adopt an agile, iterative approach to deployment. The 3 following approaches reflect different VR-maturity levels.

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CLASSROOM

VR learning is delivered as part of a face-to-face event, typically to a group of up to 12 learners. Learners experience VR either simultaneously or in smaller rotating groups, one or a few times during the day. This can be a one-off event (awareness training for e.g.) or part of longer programmes and used an onboarding and/or assessment (leadership skills for e.g.). This approach is typically adopted by organisations looking to increase engagement in existing programmes and/or reduce reliance on inefficient roleplay or costly actor-led simulations

FACILITATED PRACTICE

In the facilitated practice mode, organisations have invested in their own fleet of headsets, often mutualising use cases across departments, and have trained technical facilitators. The learners are assigned/can book specific times as part of their learning pathway to have individual practice sessions, helped by a facilitator to use the hardware. This approach is adopted by large organisations who tend to deliver their learning programmes in owned, specialised training centers.

AUTONOMOUS PRACTICE

In this model, learners are equipped, at home, permanently or temporarily, with a VR headset. Following a short technical onboarding, either face-to-face or remotely, they can practice at home at the point of need. This independant asynchronous practice works well blended with guided discussions with coaches and peers This is the model the industry is naturally moving towards. For this model to work, learning programmes will be designed from the ground-up to incorporate VR experiences. The initial cost of hardware purchase and logistical adjustment will be recouped rapidly by delivering shorter and more impactful sessions less often whilst reducing travel and accommodation costs.

3 approaches to VR deployment

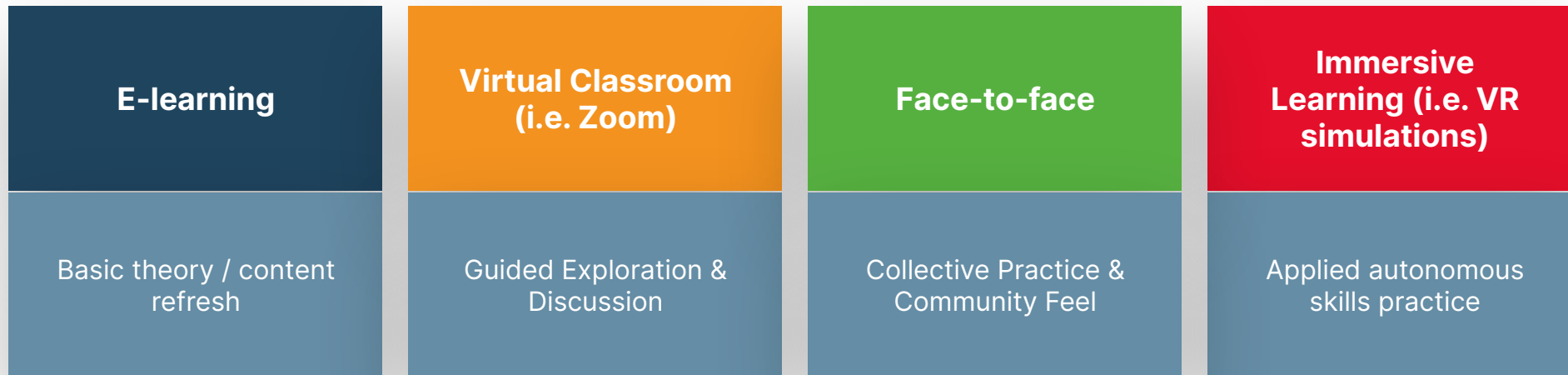|	CLASSROOM	FACILITATED PRACTICE	AUTONOMOUS PRACTICE
Headset ownership	• non-owned	• owned	• owned
Content	• off-the-shelf or POC	• multiple solutions from several providers	• multiple solutions from several providers
Facilitation	• third-party partner	• own staff trained	• trained employees, support from trainers
Organisation Maturity	• validation phase	• integration phase, mutualisation of use cases	• optimisation phase, integrated programmes
Scalability	• Low	• Medium	• High

Learning 3.0
A new generation of blended learning

Learning in VR is great but combining VR with other modalities moves learning performance to another dimension.

Learning 3.0 is a multimodal approach to learning that combines the best of face-to-face, digital and immersive solutions to propose transformative personalised learning journeys.

E-learning	Virtual Classroom (i.e. Zoom)	Face-to-face	Immersive Learning (i.e. VR simulations)
Basic theory / content refresh	Guided Exploration & Discussion	Collective Practice & Community Feel	Applied autonomous skills practice

Example of a Learning 3.0 journey

Onboarding — Skill #1 theory — Skill Practice — Skill Practice — Skill Practice — Skill #1 Debrief — Skill #2 theory — Skill Practice — Skill Practice — Skill Practice — Skill #2 Debrief — Graduation

5 best uses of VR for soft skills training

The 5 case studies below shed light on some of the best uses we've seen of VR in soft skills training.

As we provide a soft skills training solution ourselves, one of our case studies (Safeguarding VR) has been included in the list. If you are yourself a learning provider and feel like your case study should be included, reach out.

→

1

Developed by BODYSWAPS (2020)

BODYSWAPS Safeguarding VR

BODYSWAPS worked with the Humanitarian Leadership Academy to develop an immersive learning tool to empower NGOs around the world to transform safeguarding-related behavior among aid workers and volunteers at scale.

In Safeguarding VR, a 15-minute VR simulation, the learner gets an opportunity to use their own voice and body language and practice having a conversation with a virtual human named Susan; a survivor of a safeguarding incident. The learner can then 'swap bodies' with Susan to relive the conversation from her perspective, seeing a replay of their avatar talking and moving the way they did.

The experience has been piloted by the United Nations' Agency for Refugees, Save the Children and the International Labour Organisation. After a single experience, 80% of learners reported a significant increase in their confidence to handle safeguarding disclosure whilst over 90% would recommend the experience to colleagues.

Full case study here.

BOOK A DEMO

Lloyd's Banking Group Vitality & Resilience

Lloyd's Banking Group was looking to develop an immersive experience to help employees improve their emotional resilience, in other words their ability to manage stress and adversarial conditions.

In the experience, learners embody a virtual avatar and find themselves acting as an employee of a company undergoing a restructuring process. They get to interact, by asking questions, with virtual characters under different levels of stress. The learner's mission is to identify stress signs and help improve emotional states.

Over 200 employees were surveyed and rated the experience 4.1 out of 5 in terms of training effectiveness. When compared to a traditional actor-led approach, VR brought in greater consistency and reduced costs as Lloyd's reported £127,000 in training expenditures savings.

Full case study here.

Developed by Makereal (2018)

Reverto
Sexual Harassment Awareness

3

80% of employed women report being regularly confronted with sexism. REVERTO is a French start-up that uses virtual reality to raise awareness of psycho-social risks (sexism, harassment, burn-out, etc.) and to train employees to prevent incidence of misconduct.

La Traque is a 10-minute 360 film where the viewer becomes Zoe, a 30-something Communications Project Manager in a large company. Throughout the film, the learner will get to experience, from Zoe's eyes, an incessant and escalating series of sexist behaviors happening to her at the office. Based on interviews with victims of sexual harassment, La Traque gives D&I trainers a much more powerful and visceral tool to create awareness than any other previously available medium. Following the movie, an interactive VR module narrated by an expert psychologist breaks down those behaviors and quizzes the learner.

As of September 2019, the film had been used to raise awareness of workplace sexism with over 3,000 employees from 10+ companies as diverse as trade unions, France's largest employer federation and dock workers.

Video teaser here.

Developed by REVERTO (2019)

USC
Job interview skills

There's an under-the-radar stigma with veterans when it comes to job interviews as counselors can often be suspicious or aggressive towards those leaving the army. Moreover, readapting to the civilian world of work and its complex implicit cultural codes can be a challenge after years or decades spent in the military.

The USC Institute for Creative Technologies has developed a job interview experience to let veterans practice their skills with increasingly aggressive virtual interviewers. Veterans put on a VR headset whilst real vocational counsellors step into another room to control the virtual interviewer via a PC app. They can choose from a range of questions to ask the applicant, from friendly to angry, as well as trigger specific actions like sneezing or storming out of the office.

For Skip Rizzo, the director for medical virtual reality at ICT: "In VR, the parts of the brain responsible for higher-order thinking understand they're talking to a fake human. To the more primal, emotional part of their brain, though, the interview feels very real, allowing veterans to practice in a stressful but low-risk environment."

U.S. Vets, a charity dedicated to veterans in Los Angeles piloted an early version of the technology in 2016. They found that 36 out the 37 veterans who did the experience managed to find a job.

In-depth article here

Developed by USC Institute for Creative Technologies (2018)

Project Theo
Religious Radicalisation

5

Developed by Pitchboy (2020)

In France today, there are close to 10,000 people monitored by the government who are considered to be prime targets for terrorist radicalisation. Many of those are disenfranchised teenagers with whom parents are having an extremely difficult time communicating.

Pitchboy has developed Project Theo as an educational tool to help parents, teachers and teenagers learn to detect and manage early signs of radicalisation. With reach in mind, the project was developed for WebVR (i.e. accessible on a Web browser without needing a headset). It uses conversational AI to place the users in Theo's mum's shoes, prompting them to answer Theo in their own words with the objective of protecting him from isolating himself into radical Islam.

The tool has been made available to 2,500 schools and over 90% of users have fed back that the combination of immersion afforded by the 360 video and AI-powered conversation made them forget this was a fiction.

Video teaser here.

Conclusion

The 4th Industrial Revolution and the expected consequences of the Covid crisis are rapidly shifting the training needs of the global workforce towards soft skills. Yet, budget and logistical constraints make face-to-face training difficult to scale in a sustainable way whilst current eLearning solutions are failing to generate the engagement levels necessary to deliver behavioral change.

On the other hand, research points towards embodied VR as a powerful medium for behavioral change and the technology is rapidly becoming more affordable and user-friendly. Bringing together scalability and learning performance, the use of immersive technologies in soft skills training appears to be a promising solution.

Immersive behavioral training requires a fresh approach to learning design. The framework presented above sets out the key principles of such an approach. After that, the deployment phase demands a hands-on agile approach in the initial stages and a sharp focus on measuring results.

In a not-so-distant future, immersive behavioral learning will help organisations transform their culture at scale rapidly, improve workforce well-being, and drive operational performance.

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Thank you.

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