Developing Leadership Skills with Virtual Reality

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Executive Director of Education & Research Programs
Employees are disengaged at work.

Only 1 in 3 employees are engaged at work in the US.

67% are not engaged or actively disengaged.
Employee engagement in the US comes down to managers according to Gallup:

- 13% of employees strongly agree the leadership of their organization communicates effectively.
- 21% of employees strongly agree that their performance is managed in a way that motivates them to do outstanding work.
- 30% of employees feel that their manager involves them in setting their goals.
- 23% of employees feel that their manager provides meaningful feedback to them.
Immediate costs of disengaged employees - $450B - $550B a year in US

- Turnover
- Productivity
- Customer service ratings
- Safety
- Product quality (defects)

Long-term effects of employee engagement

**Earnings per share**
- Highly engaged workforces outperform their peers by 147%.

**Profitability**
- Engaged companies grow profits as much as 3x faster than peers.


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“He says we don’t see ‘eye to eye.’ What’s that supposed to mean?”

“He’ll wait all day to assign something at 5 PM, then expects it done in the morning…”

“I can’t figure out what he wants.”

“Haven’t gotten a raise in 5 years!”

“She hovers, waiting for me to make a mistake.”

“She expects me to check in with her every half hour.”

“She never has time for me. I have no idea how I’m doing!”

Managers account for 70% of the variance in employee engagement.

The soft skills gap is urgent

58% of hiring managers say the lack of soft skills among job candidates is limiting their company’s productivity (LinkedIn)

$81bn estimated annual economic cost of the soft skills gap in the US by 2025 ("The economic cost of unfilled jobs in the U.S." November 2014)
Only 33% of U.S. Employees are “engaged at work” compared to 70% of employees at the world’s best organizations. Only 13% of employees strongly agree the leadership of their organization communicates effectively.

66% of 18-34 year olds strongly feel they need opportunities to improve interpersonal skills.

Only 11% of executives strongly feel that their leadership development programs achieve desired results.

Two thirds of all jobs in 2030 will be “soft-skills intensive”.

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52% of L&D leaders say “Leadership Development/People Management” are the most important skills to train.
“Many people think of management as cutting deals and laying people off and hiring people and buying and selling companies. That’s not management, that’s deal making. Management is the opportunity to help people become better people. Practiced that way, it’s a magnificent profession.”

-Clayton Christensen

Author of Disrupting Class, The Innovator’s Dilemma, How Will You Measure Your Life?
11 essential traits of good managers according to Google study

Caring
Coaching
Communicating
Development
Emotional resilience
Fair treatment
Fostering innovation
Overall manager effectiveness
Results oriented
Technical capability
Vision and goal setting
Effective management is the oxygen of a high performing organization.

“| Effective management is the oxygen of a high performing organization |
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<td>“I’d consider speaking with my manager if I was thinking about leaving.”</td>
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<td>“I regularly get feedback from my manager that I can put to use.”</td>
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<td>“My manager has the technical know-how to help the team.”</td>
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<td>“My manager stays calm when we’re under the pump.”</td>
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<td>“My manager helps me take my innovative ideas from concept to action.”</td>
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<td>“My manager communicates a vision that motivates me.”</td>
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<td>“My manager frequently recognizes progress I make, not just results.”</td>
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Meaningful conversation is the essence of effective management

“Having deeper and more extensive interactions with employees is not just a common leader preference but also a core value for more successful companies.”

-Evan Sinar, “The Hard Science of Soft Skills”
What’s in a conversation?
Much more than we realize...

Nonverbal [presence, posture, gestures, facial expressions]

Listening [focus, inviting response, signal understanding]

Speaking [alignment of thoughts/body language/words, paraphrasing what is heard, clarifying assumptions]

Cadence [silence, pauses, rhythm, dynamics]
Can the art of listening and speaking be taught?
Spectrum of human to AI provides range of training options

“Training soft skills should be viewed as a sport. It takes a combination of positive modeling, repeated skill practice, on the job application.”

If you give people superpowers, will they use those abilities for good?

Bailenson’s Virtual Reality Hero Study
Blended human & AI approach

- Artificial Intelligence allows subject matter experts to control single or multiple avatars.
- Machine learning used to predict and classify learner’s simulation performance.
- Learners can personalize the learning challenge in real time.
Hyperreal avatars make it possible to mimic authentic facial expressions.
Situational authenticity requires avatars to be placed in realistic environments
If you give people superpowers, will they use those abilities for good?

RESEARCH: BAILENSON’S VIRTUAL REALITY HERO STUDY
Four 10 minute simulations produced statistically significant changes in teacher classroom practices.
Virtual practice gets real results.
Why simulation works for developing interpersonal skill

**Immersive** training simultaneously engages emotional and cognitive processes.

**Targeted** scenarios focus on specific objectives, isolate critical challenges.

**Iterative** practice solidifies skill through spaced repetition.

**Immediate feedback** allows learner to adjust effort and performance based on results.
Why simulation works for organizations looking to unlock workforce potential

SCALABLE
Mursion can serve 5,000+ learners per week at a fraction of the cost/time of traditional role playing.

AGILE DESIGN
Sims take a few hours to design and can easily be modified for course correction.

VERSATILE
Applicable for leadership, sales, customer service, compliance and D&I.
Hyper-real simulation achieves safety and danger at once
Use simulations to stress test for high stakes situations at work, requiring authenticity and presence.
1. AN INDISPENSABLE TRAINING TOOL

*Studies show that simulations are more effective than other instructional methods, because they simultaneously engage trainees’ emotional and cognitive processes.*

2. SUSPENSION OF DISBELIEF

When the visual appearance, voice, and gestures of a virtual avatar are properly integrated, trainees experience a sense of “presence” in the virtual world or what some might call “the suspension of disbelief,” wherein the human brain thinks of the virtual avatar as another human.

3. BLENDING ARTIFICIAL AND HUMAN INTELLIGENCE

Artificial intelligence is simply not sufficiently mature as a technology to mimic human nuances, voice, vocabulary, and gestures. Human-operated simulations using virtual avatars are far more powerful than computer-generated simulations.

Flexible learning models, each with opportunities for reflection and coaching.

**INDIVIDUAL SIMULATION SESSIONS**

Designed for private practice, self reflection, and spaced learning. Learners individually experience unique scenarios focused on one or two discrete competencies with live feedback.

**VIRTUAL GROUP WORKSHOPS**

Geared for peer-to-peer learning, learners are grouped together in teams of 3-5, each experiencing at least one scenario directly with the avatar(s).

**LICENSE TO DELIVER SIMULATIONS**

Optimal for partners who prefer to insource simulation design and delivery, including clients who are reselling simulation service to other customers. Partner designs, schedules and delivers simulation sessions.
Measuring Change: Kirkpatrick Model

- **Reaction**: Measure your participants’ initial reaction to gain an understanding of the training program and valuable insights into material quality, educator, and more.

- **Learning**: Measure how much information was effectively absorbed during the training and map it to the program or individual learning objectives.

- **Behavior**: Measure how much your training has influenced the behavior of the participants and evaluate how they apply this information on the job.

- **Results**: Measure and analyze the impact your training has had at the business level, and be sure to tie it to the individual or program.
Knowledge Gained

Measure how much information was effectively absorbed during the training and map it to the program or individual learning objectives.

Measures of Success

- **Intelligent human assessment** (subjective components)
- **Basic performance metrics** from data-rich simulation environment (turn taking, articulation rate, listening, rapport building)
- **Derived metrics** (emotional prosody, influence)
Intelligent Analytics

- Turn taking
- Articulation rate, fluency
- Emotional prosody
- Influence
- Listening
- Rapport building
- Engagement and empathy
- Affect
- Discretely measurable objectives
COMPOSITE VIDEO FOR LEARNER REVIEW AFTER SIMULATION

VR SIMULATION FOR REVIEW

PLAYBACK CONTROLS

LEARNER RATING

REAL-TIME RATING (BY SIMULATION SPECIALIST)

JUMP TO SECTIONS OF PERFORMANCE VIDEO FOR REVIEW

LEARNER VIDEO

LAG SEQUENTIAL ANALYSIS

Comprehensive performance review and reflection combines human and AI driven assessment.
Measures of Success

• Observational data can be collected during and immediately after simulations
• 360 reviews of learners (supervisor, peer, direct reports) for evidence of behavior change
• Learner reflection data

Behavior

Measure how much your training has influenced the behavior of the learners and evaluate how they apply this information on the job.
Results

Measure and analyze the impact your training has had at the business level, and be sure to tie it to the individual or program.

Measures of Success

- Identity data sources that yield either proximal or distal data (e.g. retention rates)
- Correlations between training and business impact (brand, customer service ratings, turnover, productivity, product quality, engagement scores)
Empathy is the linchpin

According to a DDI database, empathy was the foundational skill, with the largest positive correlation (with leadership).

What the data on soft skills training says

- **Soft skills can be trained.** Leaders who undergo behavior based soft skill training report a 49 percent increase in soft skills post training.

- **Soft skills training pays off.** Organizations demonstrate an average return on investment of $4,000 for every $1,100 spent developing soft skills.
Case studies: Customer service

Problem resolution scores increase 5 percent with just one hour of Mursion per hotel

“Results from the program are staggering. Hotels that received the [Mursion] training experienced the highest short-term gains in customer satisfaction that Best Western has ever measured.”

Bruce Weinberg
VP of Operations
Lee and Linda are two of your direct reports in the L & D department, and have been developing a new leadership institute. For two months they’ve been working hard and they’re excited to launch with their first cohort in 3 weeks.

Your supervisor just informed you that your company is experiencing some significant financial challenges, and the leadership team is cutting back. They’re pulling the plug on the new leadership institute. There’s not enough ROI to fly people in from across the country to headquarters and put them up in a hotel for a week during the face to face institute.

You’re faced with the challenge of how to deliver the budget news in a way that promotes understanding, while reducing frustration and even blame between Lee and Linda.
Maia has brought in her son, Archie, because he gets a lot of stomach aches. She or her husband usually gives Archie a Tums and he feels better, but she is concerned that this is happening frequently. Address Maia’s concerns and elicit answers from Archie while demonstrating empathy and professionalism.
One of your employees, Linda, is generally effective. She is smart, dedicated and passionate about helping your external customers. Recently, though, she’s responded with hostility towards some team members. You’ve witnessed it in several team meetings and you’ve also received reports that Linda frequently loses her patience with her colleague Steve, when trying to solve problems quickly. Your objectives are to:

- Actively listen to her concerns
- Ask open ended questions to learn more about the situation
- Check for Linda’s understanding about the implications of her behavior
- Motivate her to take concrete steps to improve her interactions with her peers
Immersive training combines the visual, auditory, and kinesthetic.

- **Visual**: 34%
  - Pictures, videos, graphics, diagrams, charts, models

- **Auditory**: 29%
  - Lecture, recording, storytelling, music, verbalization, questioning

- **Kinesthetic**: 37%
  - Acting, role-playing, clay modeling
Sight  Sound  Touch  Taste  Smell

Brain

The real world

Sensory affordance

The virtual world

Slater, M. (2009). Place illusion and plausibility can lead to realistic behavior in immersive virtual environments. Philosophical transactions of the Royal Society B: Biological Sciences, 364(1533), 3549-3557.

Appeal to the senses creates plausibility and place illusion.
“Simulations can create lifelike virtual scenarios that replicate the realities of the job in a safe situation... The brain and body get a very “real” experience of practice that actually activates the same neural pathway required to turn a routine into a habit.”
-Dr. Britt Andreatta, author of *Wired to Grow*
School Districts Using Immersive VR Simulations

Chicago Public Schools

Massachusetts Department of Elementary and Secondary Education

ACPS
Alexandria City Public Schools

OCPS
Orange County Public Schools

ANNE ARUNDEL COUNTY PUBLIC SCHOOLS

Fairfax County Public Schools

Rockdale County Public Schools

LAKE COUNTY SCHOOLS

ENGAGE • INSPIRE • THRIVE
You are a middle school teacher who is introducing a new instructional unit. Your objective is to elicit student thinking related to one of the following content areas (your choice):

- Language arts: Romeo & Juliet
- Mathematics: variables
- Social studies: branches of government
- Science: photosynthesis