

HOW SIMULATIONS HELP ACHIEVE DEEP & IMPACTFUL LEARNING

This paper explains the process of learning, the challenges associated with traditional learning, and how behavioral simulations help accelerate competency development and make deep behavioral impacts on adult learners. In the digital age, where technology, processes, and business models change rapidly, it is important for learners to constantly learn new things, unlearn what they already know, and relearn things in a different way, and at an accelerated pace. This is often a challenge with behavioral competencies, as they require seismic shifts in the mental models of the learner. This paper highlights the need for all corporate professionals to undergo assisted practice through simulations, as learners receiving instant feedback on the actions they take. All actions are documented within the simulation, to culminate into real-time, actionable insights for learners, and learning trends & deep cognitive insights for L&D and business.

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The problem with traditional learning

A well-established fact is that the learning process is complete when it produces a change in thought, feeling and action, specifically by practice in a social environment. Formal learning, on-the-job experience and social interaction provide learners with knowledge, and some skill. Learners are then required to put in the effort themselves to master the skill. Research suggests that this typically takes 10,000 hours or 6-10 years to accomplish. Therefore, learners find it difficult to sustain the practice of ambiguous and complex skillsets.

Why?

Traditional learning interventions lack critical elements that are required to strengthen the learning process to ensure habitual practice. Analytics to measure behavioral change, unbiased feedback, practice, and a safe environment for errors are often missing or limited in traditional learning interventions. As a result, more often than not, learning is rarely implemented. Where conscious attempts are made, changes in mindset and behavior take a long time to manifest and be recognized, if at all.

As Malcolm Gladwell describes in his book, 'The Tipping Point', "The success of any kind of social epidemic is heavily dependent on the involvement of people with a particular and rare set of social gifts". In other words, traditional learning omits facilitated practice.

Simulations – High impact immersive learning

Have you ever wondered why pilots spend thousands of hours in simulated training and practice before even entering into the cockpit of an actual plane? Or why surgeons spend years fine tuning their skills on cadavers, before operating on real people and animals? The answer is quite simple. Both these professions have high stakes, and require incredible precision, and skill. Isn't this true of the corporate world as well? The decisions that are made in the corporate world can make or break organizations, industries even.

So, the question arises – **why shouldn't learners in the corporate world go through the same kind of rigor?**

Today, organizations across the globe are fundamentally changing in the way they are built, and how they operate. This has distinctly created the need for a change in the set of capabilities professionals possess, and in the way that they function within the organization. With the world rapidly changing, existing modes of learning showcase diminished effectiveness and impact. With traditional learning interventions failing to rise to the challenge, a focus on learning and development across the workforce is even more pertinent now.

In other words, traditional classroom based learning interventions are just not cutting it anymore. It is time for a change.

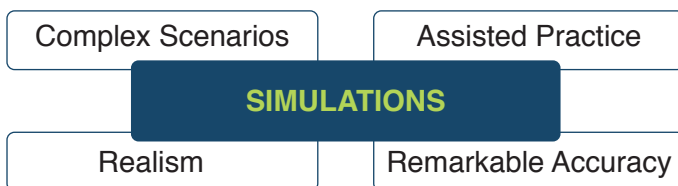
How do simulations ensure that learners implement and sustain the knowledge and skill developed through a learning intervention?

This is where the use of simulations closes the loop, bridging the gap between theory and practice, and delivering a demonstrable mindset change in the learner. Over the last decade, simulations have been gaining momentum, and becoming an integral part of corporate L&D strategies of organizations across industries. This is attributed to:

1. Improvements and larger inclusion of technology in the workplace, owing to the Digital Age
2. A seismic shift in power, authority and influence within the workforce, resulting in flatter organizations
3. A large body of impact studies on the incorporation of simulations into learning, over the last decade

In short, simulations are fun, and impactful.

How, you may ask!



A simulation is a technique for practice and learning that replaces and amplifies real experiences with facilitated ones. Immersive in nature, simulations replicate significant aspects of the real world in a fully interactive fashion, to develop knowledge, skills, and attitudes, whilst protecting professionals from unnecessary risks, that is, in a safe learning environment. They provide structured learning experiences, and measure predetermined competencies and learning objectives.

It is important to remember, however, that the primary purpose of simulations is not to 'edutain', but to transform the way that people think and behave. While this is not an easy task, it is a crucial step to altering a learner's mental model, facilitating the process of unlearning and relearning.

How simulations make learning effective and retentive – Part 1

To understand this, let's step back and try to first get familiar with some key concepts and research studies in this area:

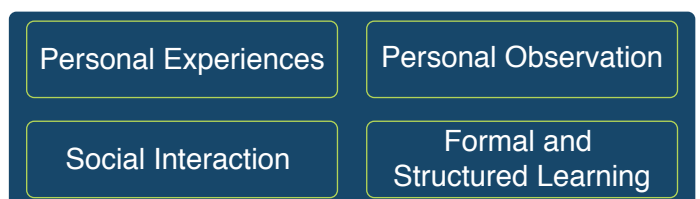
1. Why unlearning and relearning is so difficult for adult learners
2. The Iceberg Theory of Learning
3. The Learning Process: Conscious-Competence Model

1. Why unlearning and relearning is so difficult for adult learners

The answer lies in the beliefs that:

- I already know
- I am right

These biases are a result of a learner's 'mental model', a concept made popular by Peter Senge, Director of the Centre for Organizational Learning at the MIT Sloan School. Mental models are depictions of how an individual understands the world, and this, in turn, affects how an individual behaves. Practically speaking, every person understands the world differently, because of the unique combination of experience that every person has. In other words, a learner's mental model is a result of a combination of:



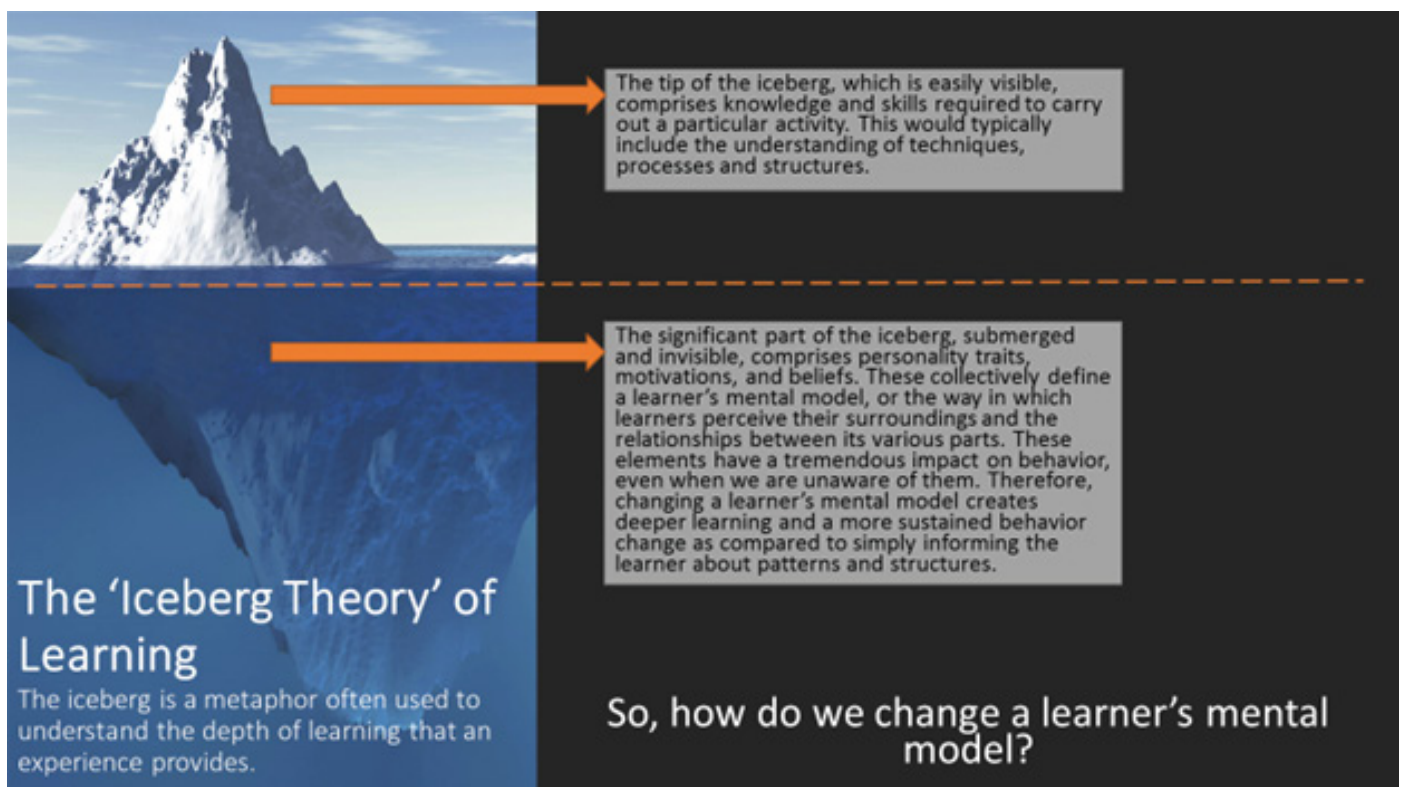
These four components possess significant power to influence what a learner believes in and accepts as the truth, because we associate certain 'right' and 'wrong' attributes, based on our existing mental models. As such, learners evaluate new information based on existing values, beliefs, knowledge and experiences. However, in doing so, learners prevent themselves from either learning anything new or from stepping out of their existing mental models to approach a concept or an idea in a different way, in an unbiased or unadulterated form. In short, the way in which learning takes place today is superficial, and prevents us from digging beyond the tip of the iceberg. Hence, learners' mental models rarely change. To unlearn and relearn, we need to completely rewire our brains to think, feel and act differently, and that is the hardest part.

As American writer and futurist Alvin Toffler once said,

“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”

2. The Iceberg Theory of Learning

The Iceberg is a metaphor often used to understand the levels or depth of learning that an experience provides. It is especially important in learning, as the iceberg facilitates an understanding of the impact that a learning experience or intervention has caused.



As illustrated above, knowledge of techniques and processes, and the understanding of skills are just the tip of the iceberg. They represent the 'what' and 'how' of learning. However, they do not equip learners with a deeper understanding, of application, motivation, and practice to not only master a skill, but also confidently sustain the practice and implementation of the skill.

To understand this better, we look at the process of learning any new skill.

3. The Learning Process: Conscious-Competence Model

The main outcome of learning any skill is acquiring the level of competence to perform the task unconsciously, or in a habitual manner. According to Noel Burch, developer of the '4 stages of learning any new skill theory', the process by which skills and abilities are learned normally takes the learner through four stages of learning:

Unconscious Incompetence
– learner isn't aware of the behavior change required

Conscious Incompetence
– learner is aware that change is required and at present doesn't have competence

Conscious Competence
– learner is aware and practices to change behavior

Unconscious Competence
– habit formation and changed stabilized at sub-conscious level

- **Stage 1** – Unconsciously unskilled (Unconscious Incompetence), where learners are unaware that they don't know something. For example, if you have never driven a car before, you are likely to feel self-conscious and awkward the first time you get behind the wheel of a car because you don't know what to do

- **Stage 2** – Consciously unskilled (Conscious Incompetence), where learners become aware that they don't know something. Once you start learning to drive the car, you realize that you don't have the proper skills to drive a car now, and you work towards changing that

- **Stage 3** – Consciously skilled (Conscious Competence), where learners become aware of the knowledge and skill. You are now able to drive a car, but need to consciously focus on the task at hand

- **Stage 4** – Unconsciously skilled (Unconscious Competence), where learners, through practice and continuous application of skill finally arrive at a stage where the ability becomes easier, and perhaps even natural. It is now that you can drive a car comfortably. Driving a car no longer requires concentration and conscious effort, as the habit has been formed this change is stabilized at the sub-conscious level

It is in repetitive action in practice that finally habituates a learner with a skill set, such that they may perform it unconsciously. In learning, unconscious competence is indicative of a change in the learner's mental model.

Typically, a learner's primary response to a situation comes from their subconscious patterned behavior, for which real time, scientific feedback is not provided, and subsequent repercussions can be grave.

How simulations make learning effective and retentive – Part 2

In the learning process, illustrated above, Noel Burch talks about 4 levels to mastering any new learning. Employing the simulation technique to learning, the impact of the learning process is significantly higher, with higher returns, and lower error margins. This is because the conscious-competence model highlights the importance of feedback in the learning process, which is often missing in traditional learning techniques and approaches.

Unconscious Incompetence

- The two primary learner problems at this stage are that:
 - Learners at this stage either are unaware of or deny the relevance of a particular skillset
 - Learners are unaware of or deny their deficiency in a particular skillset
- The demonstration of a simulation at this stage generated active interest among learners to engage in the technique

Conscious Incompetence

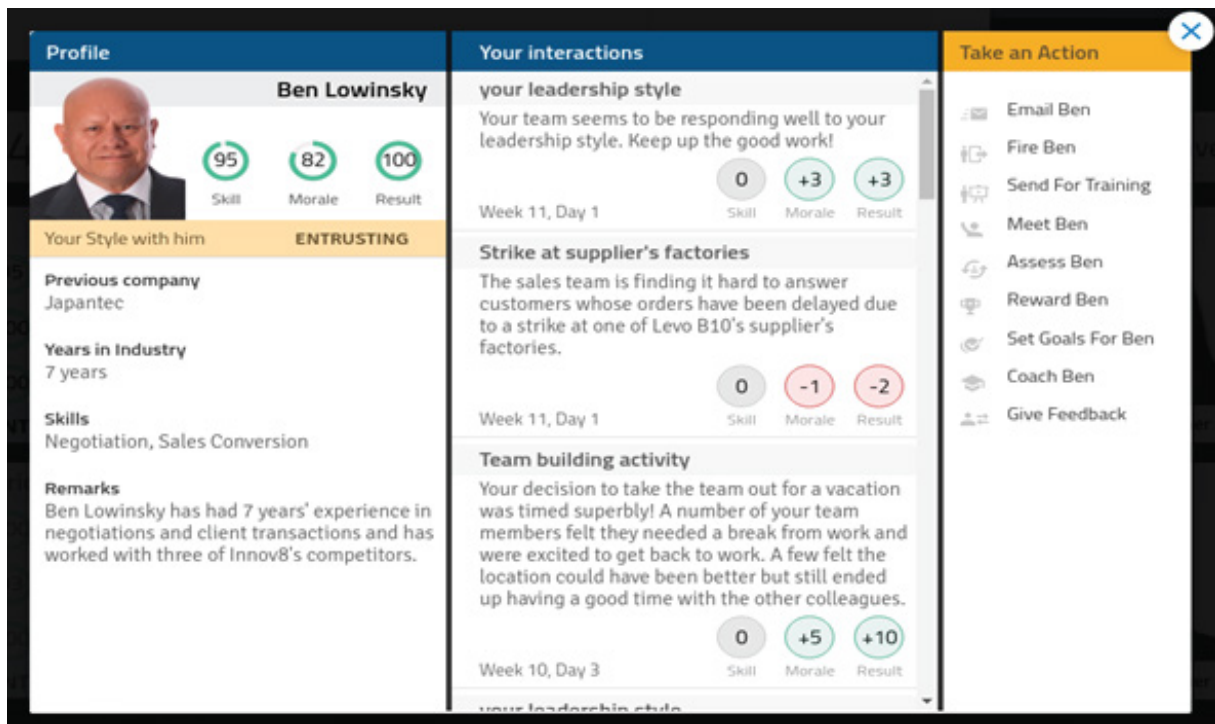
- The complexity and real-life like environment within the simulation attracts learners to continue engaging with the simulation
- Feedback provided on each action indicates the areas of strength as well as improvement to the learner, highlighting the lack of mastery over a skillset or competency

Conscious Competence

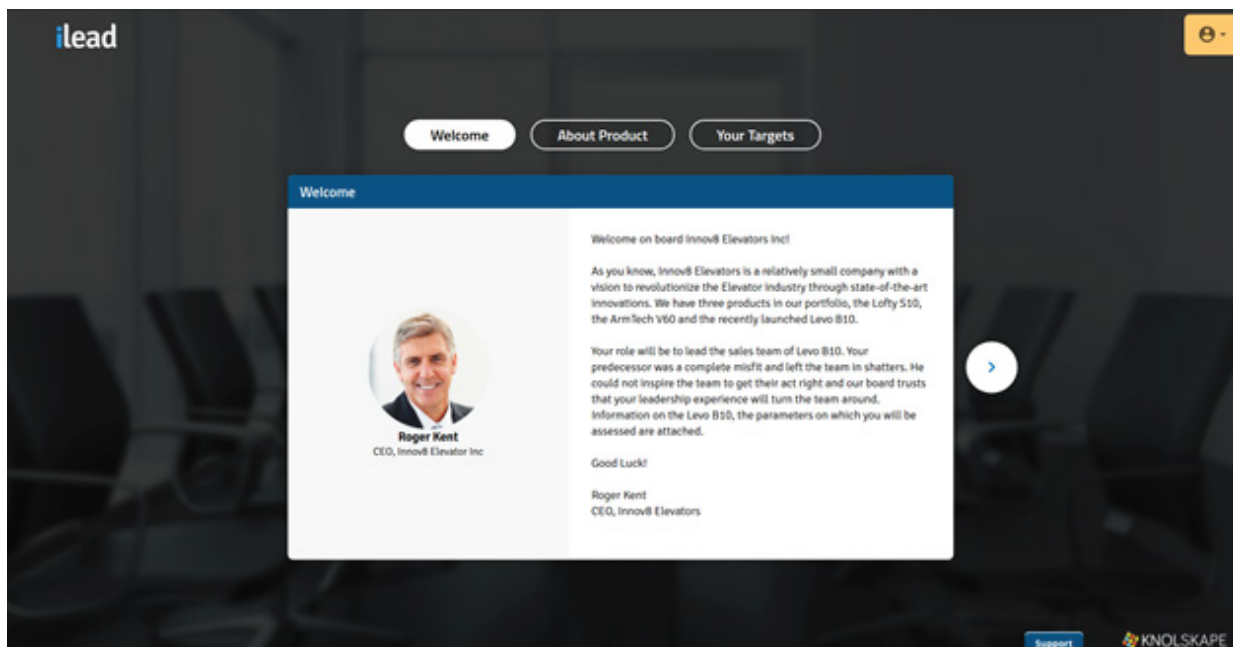
- Transition to the fourth and final level of the process is a result of constant practice
- The constant action-feedback-action loop within the simulation prompts learners to strive for perfection, thereby propelling continuous engagement, and more importantly, practice
- Gamified elements within the simulation, such as leaderboards and points invigor competition, furthering the immersive engagement experience of the learners

Unconscious Competence

- By the end of the simulation, learners have had enough practice to increase confidence levels of exhibiting the newly learnt behavior in the real world
- By this stage, learners are in a position to even impart this skill to others



Within a simulation, however, learners are provided with a safe learning environment where they go through a constant feedback loop - receiving instant feedback on the actions they take. Done repeatedly, this assisted practice helps condition learner behavior, breaking current behavior patterns in favor of new ones, and improving chances of mastering a skill.



A simulation creates a real life like environment for the learner. Within the simulation, the learner is presented with the context to his or her role within the simulation. This includes a welcome message comprising information about the organization, the product to be sold, and the learner's targets within the simulation.

The screenshot shows the iLead simulation interface. At the top, there's an 'Introductory Message' from the CEO. Below that, a 'Team' section shows the current role 'YOU, Sales Director' and a grid of team members categorized by role: Sales lead, Quality, Proposal, Negotiate, and Conversion. Each team member card includes a name, a placeholder image, and a 'Know more about me' button. On the right side, there's an 'Actions' menu with options like 'Meet the Team', 'Energize team', 'Send email', 'Swap / Reassign roles', 'Send for training', 'Hire member', 'Fire member', 'Meet Face to Face', 'Assess member', 'Reward member', 'Set Goals', 'Coach member', and 'Give feedback'. The top right corner shows a progress bar for 'Day 1' of 'Week 1/12' with 'Time left 120:00' and a 'Target' of '\$ 0 / 300,000'.

The actions that learners are expected to perform within the simulation are also as close to their real environments as possible.

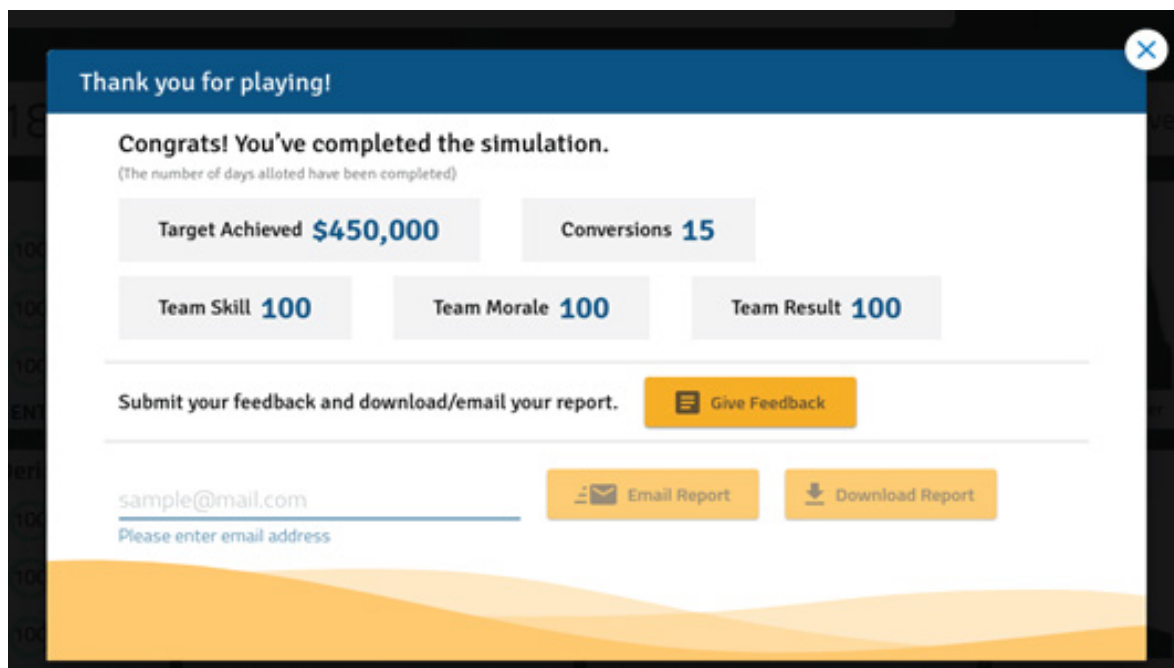
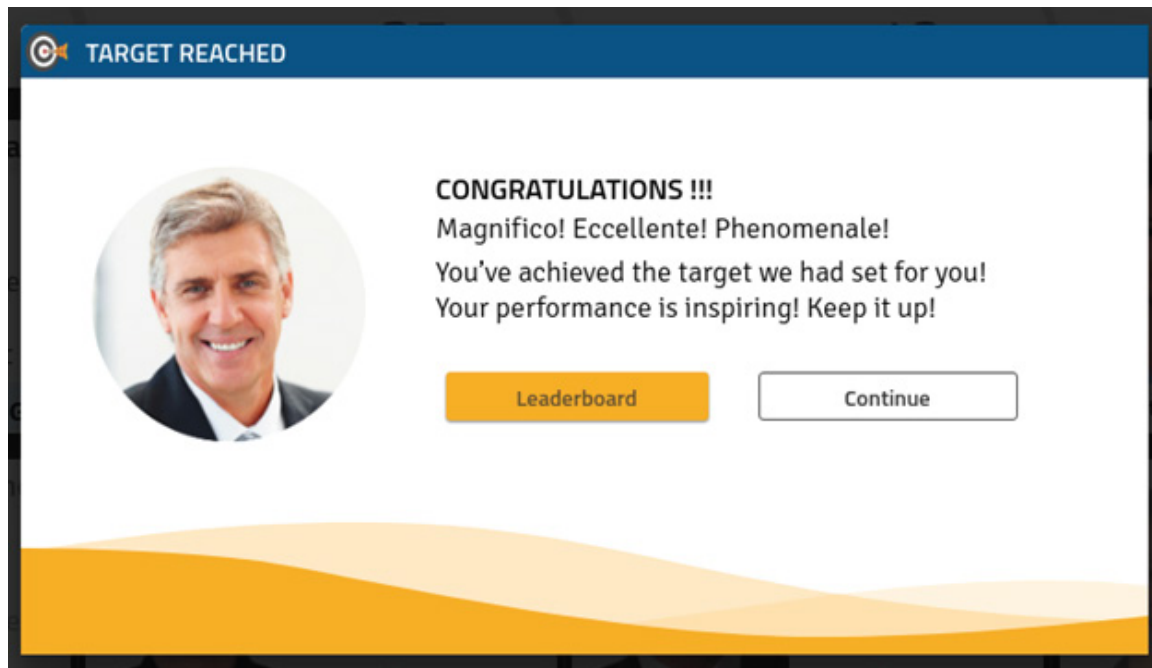
The 'Leadership Styles Summary' screen displays a table of team members and their assigned leadership styles for the week. The table has two columns: 'Team' and 'Leadership Style'. Below the table are 'Go Back' and 'Proceed' buttons.

Team	Leadership Style
Kent Goldberg	Directive
Beth Killiney	Guiding
Justin Keel	Directive
Derick Kaynes	Entrusting
Green Bell	Partnering
Lowe Rex	Partnering
Jack Holt	Entrusting
Peter Higgins	Directive
Ruth Ether	Partnering
Mandy Lobert	Guiding

This block contains four screenshots of detailed reports from the simulation:

- Leadership Style Report:** Shows a range of leadership styles used by the manager, with a bar chart indicating the percentage of team members affected by each style: Directive (46%), Guiding (15%), Partnering (25%), and Entrusting (14%).
- Contextual Leadership Capability:** A bar chart showing the manager's score of 53% on contextual leadership capability, comparing it to team members' scores.
- Consistency by Roles:** A table comparing the manager's intended leadership style with the style actually adopted by team members for each role.
- Team Member's Top 5 Scores:** A table showing the top 5 performers based on average performance, with columns for Team Member, Score, Delta vs. Subtasks, and Actions taken.

All actions are documented within the simulation, to culminate into real-time, personalized analytics – actionable insights for learners, and learning trends & deep cognitive insights for L&D and business.



Most importantly, within a simulation, learners are given the autonomy to test their hypotheses and witness the repercussions of their actions on their own, motivation to continue positive response inducing behaviors and change habits that are detrimental to their work and responsibilities, and ultimately attain mastery over the skills they are learning. After all, practice makes perfect!

If that is not enough to convince anyone of the significant impact of using simulations, over the traditional classroom-based, or eLearning interventions, let's take a look at the benefits of simulation-based learning:

Benefits

**Demonstrable
mindset changes**

Gamified simulation powered programs provide safe and fun learning environments for learners to face scenarios akin to their roles

**Exceptional
ROI**

33% higher engagement, 67% better knowledge retention, and 23% faster skill development vis-a-vis traditional learning

**Actionable
Insights**

Detailed analytics and reports provided with every component of the learning program

**Higher
Completion**

KNOLSKAPE's developmental programs demonstrate a 95% completion rate

Select Success Stories

**Simulation-based
learning improves
quarterly results:**

Leading private sector bank's senior leadership team increases revenue energized by KNOLSKAPE's Strategic Planning Programs.

**Simulation-based
learning empowers
Industry HiPos:**

Manufacturing giants leverage KNOLSKAPE's "Driving Innovation" and "Influencing without Authority" programs to bring together their high potential leadership in a forum of collaborative learning, and networking to enhance and demonstrable competencies.

**Improving learning
Impact in a shorter
duration:**

Leading business conglomerate credits KNOLSKAPE's simulation powered leadership journey for dramatic improvement in leadership competencies, resulting in higher results in business KPIs.

**Transforming
learning with
simulations:**

IT giant's mid-management switches to KNOLSKAPE's simulations for Influencing without authority, coaching & strategic orientation.

**Coaching
managers to build
leadership pipeline:**

Leading automation company invests in enabling senior managers to shape HiPos into next level leaders through KNOLSKAPE's simulation powered "Manager as a Coach" program.

**Simulations to
groom individual
contributors:**

Simulations to groom individual contributors: MNC IT Corporation uses KNOLSKAPE simulations to upskill individual contributors across the globe for effective team management and strategic orientation.

**Driving digital
adoption at the
C Level:**

MNC IT consulting leader relies on KNOLSKAPE's simulation lead workshops aimed at digital mindsets, technology change and innovation for the CIO group.

**Preparing HiPos
for the next
level:**

Central Bank enthuses future leaders to take new responsibilities through KNOLSKAPE's simulation-powered Young Managers Program.



Thank You

To experience is to learn.
Everything else is just information.

About KNOLSKAPE:

KNOLSKAPE is a Modern Workplace Learning company that uses experiential technologies to accelerate learning, transform employee experience and boost productivity across four key areas: Leadership Development, Sales Effectiveness, Digital Transformation and Frontline Development. More than 200 clients in 17 countries have benefited from KNOLSKAPE's award-winning experiential solutions. Using business simulations, gamification, mobile, social, artificial intelligence, virtual reality and machine learning, KNOLSKAPE delivers transformative learning experiences for the modern learner, rich analytics for the HR teams and improved performance for the organization.

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