



## Performance-Based Simulations: Customizable Tools

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The use of performance-based simulation learning tools to educate the enterprise is growing rapidly due to the decisive success rates of specialized, interactive content that teaches leaders high-level business acumen in a real-world, risk-free setting. Companies like Accenture, IBM, SimuLearn and OutStart have expanded performance testing from mildly interactive e-learning programs into full-fledged training development software and content-authoring tools, which may be customized to fit any organization's needs.

Today's simulations can actively engage and respond to user stimuli, creating an effective and lasting learning experience in real-time, any time, reducing the resources needed to create training materials. "Simulation is one of the most efficient ways to learn a high-level skill," said Mike Smialek, president of Knowledge Dynamics Inc. "Off-the-shelf title libraries are not effective at teaching skills—only at building awareness. Developing and mastering new skills requires practice. Simulation is the most effective way to do that." Knowledge Dynamics Inc. (KDI) creates educational simulations that engage cognitive skills to teach complex systems or processes to help the user quickly advance on-the-job reaction time and gain knowledge.

Operating under the premise that workforce performance is what drives enterprise performance, KDI has created simulation tools that can take an Excel spreadsheet and turn it into an application, thereby providing a mental model of the enterprise so that workforce training is done in a unified, consistent manner. Another tool generates assessment and feedback. "We can build very rich, very sophisticated simulation models in Excel 50 times faster than we can build them by coding them in JavaScript or action script or some other Web scripting language," Smialek said. "We can take existing parts of a spreadsheet and integrate that right into the training. It's very focused and tailored to the customer's business, markets and customers."

KDI's customized simulations have a high level of user interaction that works faster than traditional training or e-learning methods, as evidenced by the company's work with Northwestern University's engineering school. In the third quarter of its students' freshman year, Northwestern teaches an advanced course in engineering analysis called "Vibrations and Modes," a filtering class designed to weed out the faint-hearted. KDI took the last two weeks of class material, customized it into an online simulation and made it available to students for a

three-week period early in the quarter. At the end of that three-week period, they took a test. Those who passed were excused from the last two weeks of class. "Last year, about a third of the class, or 128 people, attempted to learn asynchronously; 108 scored 75 percent or higher on the test. That accounted for 35 percent of all freshman engineering majors, who were excused from class two weeks early because of our simulation," Smialek said. Simulation training versus classroom training brought about an 85 percent pass rate, enabled students to learn flexibly on their own time and allowed them more time to work on other projects. The remainder of the class got more time to study and enjoyed closer attention from the professors.

PriSim Business War Games Inc. (PriSim) takes the entertainment route to accomplish similar goals in simulation training. PriSim creates interactive business training solutions in the form of two- to three-day on-site seminars for corporate clients, typically mid- to senior-level managers. "We do computerized business simulation war games combined with classroom lecture and discussion," said David Semb, partner, PriSim Business War Games Inc. "Our custom simulations model the complete operations of a working and growing business. In real-time, attendees get to run a business from the standpoint of CEO for a day and compete with other teams within the group that they're working with."

PriSim business war games touch on the core aspects of running a business in several rounds of competition running the simulated company. The training time spent in lectures discusses fundamental business drivers, including strategic planning, alignment, mission objectives, financial ratio analysis, leadership and team building, project evaluation and ROI. PriSim customers can choose from existing simulation software, have customized software created or have course content customized to mirror the particular workings of their business.

For instance, PriSim customized an existing mortgage industry simulation for Washington Mutual called Cycloan, which focused on the company's way of doing income statements and the needs of its changing business model. Washington Mutual needed to effectively communicate the way business success was being measured, and the way revenues, expenses and profitability were being reported. Cycloan replicated the business aspects of a working loan center. Some 30 people divided into six teams to compete against each other, each team running its own loan center. Each team received base segmentation data on the marketplace to differentiate the needs and wants of specific client groups and made decisions on how much time to spend on training loan originators: what products they want to learn to sell to different market segments, what rates to charge for specific

products, promotions, lead sources and all of the staffing and sales management decisions they would need to make in real life.

“The overall goal was twofold for Washington Mutual,” Semb said. “One part built fundamental business acumen in their managers at a regional and area level. The second addressed the change in their business model from a profit perspective. Our goal is to give the attendees intense, highly interactive training on core business principles. The goal is to take the directors, managers and VPs to the next level of business acumen and leadership. We’re trying to give them this holistic view that ties together the different core functions of running a business. As a manager, how do the specific decisions that I make operating my loan center feed into the rest of the organization? How do our strategies feed through the final analysis of profitability?”

Experience Builders LLC (EBL) believes that simulations should be a central component of any e-learning strategy. “Our whole crux for existence is this notion that simulations are a very effective way to train in many different contexts,” said John Cleave, co-founder, Experience Builders LLC. The Experience Builder builds large-scale soft-skill-focused simulations for interpersonal communications or investigation and other kinds of immersive tasks that learning organizations may want to put online. Web-based simulations use a suite of authoring tools to offer an environment where multiple subject-matter experts, authors, managers and users can collaborate to add multimedia elements and create a truly customized product.

Co-founder Scott Cleave said that simulations can get very big in terms of content, so it’s important to know the how and why during development. “How do I plan out what this user experience is going to be? Where is the learning going to take place? Simulations are built page by page,” Cleave said. “The trouble you run into with most authoring tools is that it becomes very difficult when you want to make changes. With our authoring tools, there is powerful content management built into the learning design. We have a process that builds the content step-by-step, so you wind up with a high-quality simulation that’s well thought out from beginning to end.”

Sivox Technologies Inc. has a suite of application tools and simulation products. Each uses an engine with voice-recognition software to actually listen to the user and provide immediate, interactive feedback to train employees on products and services or screen potential employees for appropriate skill sets in the call center or customer service industry. For instance, RealCall trains customer call-center agents on the complexities of call flow segmentation and how to use tools in the call flow to handle customer scenario interaction. “It’s a simulation product that creates an interactive environment exactly as a real call would take place,” said Wade Baker, CEO of Sivox. “There is a coaching module inside the engine so that when you make

a mistake, instead of someone yelling, there’s a coach with a built-in voice-recognition engine that comes into your ear, and on the screen, and hints at improvements in your response. Or, the coach takes you out of the training session and puts you into the learning center where you will be barraged with information about the step you’re currently at.”

Sprint PCS has trained some 15,000 call-center agents using RealCall as the basic simulation training tool to bring call-center agents up to speed on specific types of dialogue and call interactions they might encounter. Sprint wrote some 50 simulation scenarios for use in RealCall to assist their call-center operators with step-by-step call flow. The company measures training response in several ways, including cost savings and average call handling time reductions. In the call-center business, these improvements equal a significant increase in productivity. “We’ve had average call-handling time that is measurably improved by 10 percent plus,” Baker said. “Sprint had a 33 percent reduction in agent attrition. With 27 customer contact centers and approximately 15,000 agents, turnover is a constant, and they reduced turnover by a third. Sprint has pointed to a \$50 million return on investment in a three-year period of time.”

Baker said that simulation training guarantees the same quality of interaction. “When you talk about ROI, (simulation training) improves customer satisfaction, upselling of new products and services, and creates customer service best practices for the enterprise. We’re talking about putting a measurement platform underneath the enterprise that measures a hundred different matrixes. I can tell you exactly what this person did right and what this person did wrong and let you, as a training supervisor, listen to all of their questions and answers and grade their dialogue. It’s not meant to replace the training department; it’s an adjunct to make the training much more efficient and completely immersion-based so that the trainee can leave there saying, ‘I understand the experience.’”

Simulations engage users emotionally so that the impact of training is internalized more completely than in other training methods. Texas Instruments (TI) discovered this when it hired BTS-USA to create a customized business simulation for senior management. Texas Instruments wanted to increase customer loyalty and create a more customer-centric attitude in the company. In response, BTS-USA created the Customer Loyalty Bootcamp, where managers faced all of the product development and market-share challenges and financial profitability metrics of a fictionalized streaming wireless video handset company, Streavo, similar to some of Texas Instruments communications customers.

A key issue for simulation users was their semiconductor supplier, Terrific Instruments. The Terrific Instruments chip goes into Streavo’s handset, and Streavo’s management team designed the technology around the chip. Streavo is critically dependent on the chip

and makes all scheduling, cost, performance, design, manufacturing and time-to-market decisions based on a promised delivery date. A few hours into the simulation, BTS introduces a series of exogenous variables or “wobblers,” including an eight-week delay in delivery of the promised semiconductors.

“We play up the fact that in real life, TI has delivered later than promised, and many TI managers weren’t sensitive to what the impact is on the customer,” said Dan Parisi, senior vice president, BTS USA. “After participants get the notice and realize that they’ve built their entire annual forecast around a delivery date that won’t come through, with little to no explanation, people get upset. There are six ‘wobblers.’ We tell them, ‘We understand that you’ve built the entire functionality of your Streavo handset, your image quality and feature richness around our semiconductor and what we promised. However, instead of having a functionality of 100, you’re getting one of 80. It’s only 20 percent off of what we promised. We don’t think it’s that bad. By the way, have we told you how terrific we are?’ That’s the kind of interaction they’re getting.” The Customer Loyalty Bootcamp simulation touched three areas in a development process where a company can be hurt: time, cost and performance.

Later, the teams reassembled in a conference room to discuss the experience. Frustration, anger, feelings of betrayal and a desire to look for another supplier are all listed on a white board. Next the managers watched video clips from actual Texas Instruments customers commenting on Texas Instruments’ real-life execution and realized there’s a lot of overlap between what the customers say about Texas Instruments and what they just said about Terrific Instruments. Next, Texas Instruments managers went over research to assess the financial impact of Texas Instruments execution failures to customers. Millions of dollars are lost when the customer misses his market window, and the revenue forecast drops accordingly. The dollar impact on Texas Instruments is also significant in fewer chip sales, fewer reorders and customer dissatisfaction. “You go through the simulation, you do customer videos, you come back together and look at some objective data on the dollarized impact, and it’s a really comprehensive way to get them to think emotionally and then logically about customer loyalty and why they need to change,” Parisi said.

The inherent value of simulation training is that learners can practice strategically impactful business skills and apply them in a risk-free training environment, sparing real-world assets. This kind of efficiency- and performance-focused theme means that simulations are heating up the enterprise learning arena. “Our customers say that once you exceed a workforce of 4,000 or 5,000 people, the payroll costs are so high it makes no sense to waste time on ineffective training. It’s better to create custom-based simulations that deliver skills to the

workforce,” Smialek said. “Enterprise performance depends on workforce performance. The most efficient way to increase workforce performance is with simulations tailored to your markets and your way of doing business.”

The future of enterprise training may include widespread deployment of simulations. “Simulation training is becoming more ubiquitous across the enterprise,” John Cleave said. “I’m starting to see a huge penetration in some of the less traditional training areas like customer service and sales because if you preach the five things you need to do in a sales call, it falls on deaf ears. That’s not the way the brain works. If you say work through this sales situation, I’ll give you coaching as you go, all of a sudden it resonates. I think people are going to become discriminating. It’s all about the content. Have you actually captured the flavor of this situation? Have you simulated enough or too much? If we can actually crack the nut of lowering development costs without compromising the very thing that makes simulation-based training so effective, then we’re going to open it up to all sorts of tasks, and we’ll truly it make a significant portion of the training mix.”

“If you have scarce people, scarce budgets, and you want to invest in people development, you’re not going to go through lectures—you’re going to put them in simulations,” Parisi said. “You have a choice in the market of off-the-shelf simulations versus custom simulations. You can do off-the-shelf, but it’s not going to be your metrics, your market model, your business model, your economic engine. If you want to get serious about your executives and management developing so they understand what levers and knobs they can pull in the company to drive profitability and shareholder value, then you do the custom stuff. You create an experience that becomes part of the culture of the company.”

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