

Leadership Lessons From the Sims

BY MICHAEL A. ROBERTO

Simulations engage learners in meaningful experiences that allow them to actively apply learning to real decision-making situations. But building an effective sim requires that instructors cede control and embrace divergent results.

How do I apply what I have learned? Every faculty member and leadership development professional has been confronted with that question by a skeptical listener at the end of a presentation or case discussion.

Most of us have a stock answer to that question for the particular topic we are teaching, but it does not always satisfy our audience. Occasionally, someone will get right to the heart of the matter by asking, "I understand what worked or didn't work for the organization in the case study, but can I really build my judgment and leadership skills simply by reading about what others have done and discussing their approaches?"

In short, managers and students want to actively practice key skills and competencies as part of a leadership development program. They want us to take active learning to a whole new level. Active learning certainly beats passive learning, but are case studies sufficiently active? Can we enrich the experiential learning that takes place in our organizations and thereby enable people to improve by actively practicing the art of leadership?

It didn't take me long as a young teacher to learn that I didn't want to put students in a listen-only mode in my classroom. When students were actively engaged in discussion and working through problems, as with the case method at Harvard Business School, they were more motivated and invested in learning. As their instructor, I could assess their ability to synthesize the information from cases and give them feedback in real time.

However, in working with both MBA students and participants in executive education, I started to think

about adding another dimension. Could we go beyond reading and talking about what the executives should have done in a case study and create a mechanism to give the students more real-life experience in decision making, teamwork and problem solving? How could we put the student in the case so they might experience what an executive saw? How can they be forced to react to the feedback he was getting minute to minute as he faced a challenge?

These questions led me to experiment with simulations, in which students use online technology to get information, make decisions and get immediate feedback on their choices and those of their colleagues in a particular program or class. Simulations bring climbing Mount Everest to life as a study in leadership, teams and decision making.

A multimedia case study about the Columbia space shuttle disaster teaches critical communication skills. In the Columbia multimedia experience, students are assigned the role of one of six team members at NASA. They experience the first eight days of Columbia's final mission as that individual did. They listen to re-enactments of meetings in which the individuals participated, read their e-mails, review phone messages received and examine other data that the individuals examined during the mission.

Students do not see the data to which other individuals at NASA had access — they only see their character's view of the world. When students come to class, they must role-play what they think happened at the critical mission management team meeting that took place on Flight Day 8. We conduct the role-play in two ways: first as they think the NASA managers and engineers actually behaved and then as they believe the people should have behaved. The role-plays

IN PRACTICE

SIMULATIONS AT WORK AT DAU

Defense Acquisition University (DAU) was established to provide practitioner training, career management and other services to help 126,000 Department of Defense (DOD) Acquisition, Technology and Logistics (AT&L) personnel make smart business decisions.

In 2003, DAU started to explore using online simulations for training. Due to the nature of the roles within AT&L, real learning experiences often are too expensive, dangerous or infrequent to provide adequate learning opportunities.

For example, contingency contractors can be deployed overseas at any time in support of activities ranging from a relief effort to a military action. Procurement processes that a contractor is used to doing in an office with an Internet connection and an established supplier network could suddenly require working face-to-face with contacts who speak a different language and have different cultural experiences.

"Simulations have a good track record of effectiveness for training and education and deliver experiential learning, which is fundamental to DAU's training approach," said Hans Jerrell, DAU deputy director of the e-learning and technology center. "Our primary goal is to improve acquisition outcomes, and simulations help us do this by placing someone into varied, challenging situations to practice and learn in a safe environment."

Whether a brand new contractor, a transfer from a program office in the U.S. to one in the field or an experienced officer needing a refresher to be aware of policy changes, it is impossible to offer classroom training to address every instance these individuals will encounter. DAU focuses on helping personnel learn a core set of principles in the classroom and then offers simulations and other programs to help them learn to adapt and transfer those core principles.

"There is a big difference between ability to recognize the correct response on a multiple-choice quiz and the ability to generate a correct response when working through a simulation. This approach to learning is more comprehensive and very powerful," said Dr. Alicia Sanchez of games and simulations at DAU.

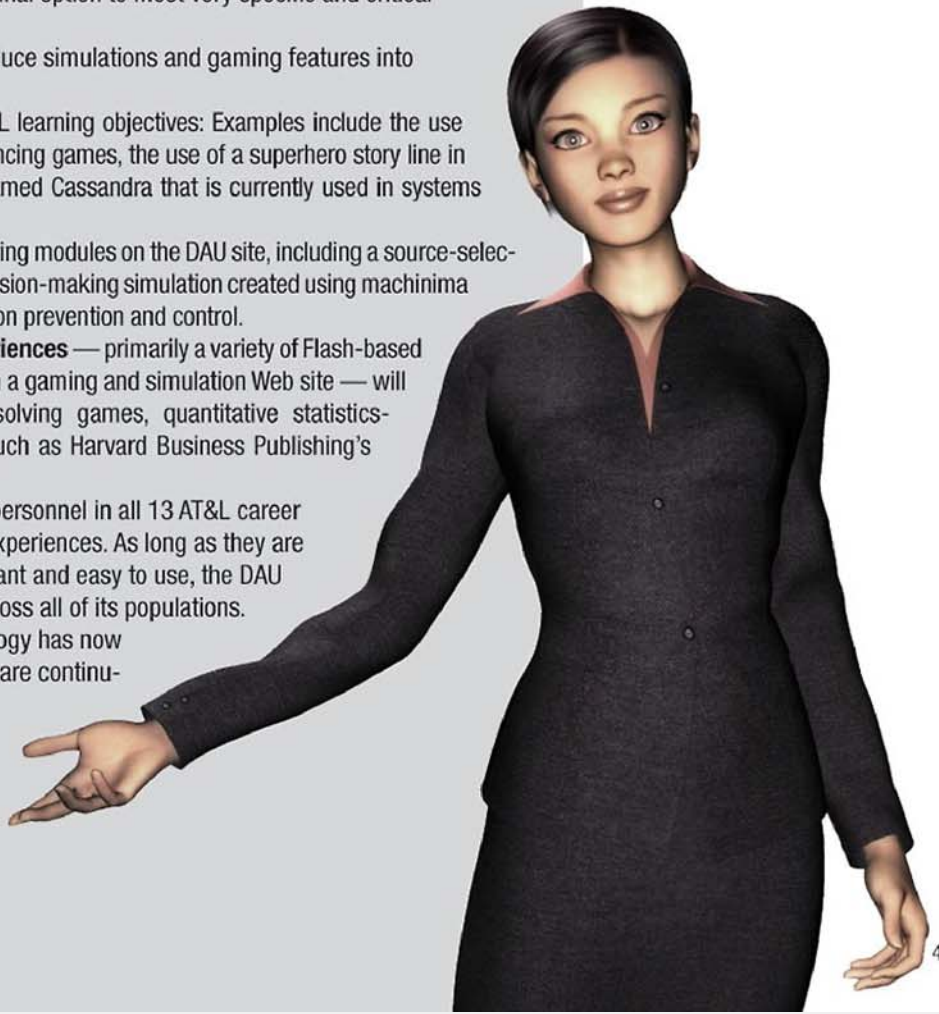
When evaluating simulations, DAU first researches whether an off-the-shelf product will work. When necessary, it may make modifications to a commercially available simulation. Internal custom development of a simulation is a final option to meet very specific and critical learning curriculum requirements.

In the coming year, DAU plans to introduce simulations and gaming features into training initiatives, including:

- **Specific DAU courses** aligned with AT&L learning objectives: Examples include the use of mini-games in business, cost and financing games, the use of a superhero story line in contracting courses and a card game named Cassandra that is currently used in systems engineering courses.
- **Virtual learning** through continuous learning modules on the DAU site, including a source-selection module that includes a branching decision-making simulation created using machinima technology, and a game based on corrosion prevention and control.
- **General business and leadership experiences** — primarily a variety of Flash-based applications that will be housed online on a gaming and simulation Web site — will include tycoon-type games, problem-solving games, quantitative statistics-based games and negotiation games such as Harvard Business Publishing's "Negotiating for Results."

DAU offers simulations and games to personnel in all 13 AT&L career fields, with varying field and technology experiences. As long as they are matched to the course level and are relevant and easy to use, the DAU staff believes simulations have appeal across all of its populations.

"What was at first a disruptive technology has now become mainstream," said Sanchez. "We are continually looking for innovative ways to create more engaging programs that help us advance and retain our personnel, and simulations definitely contribute." **CLO**



put them on the spot, and they truly live in the shoes of those managers in a high-stakes situation.

The Columbia and Everest simulations are just two of a growing group of business situations and challenges that simulations are bringing to life in organizations and schools around the country. Simulations are proving to be powerful teaching tools with both

say, “This is what I would do if I were CEO.” However, as research has shown, people often say one thing and do another when faced with a real situation. With a sim, we can put people in an exercise, see how they behave and then give them instant feedback so they can assess the consequences of their actions and reflect on how they might improve.

Sims are not just for the students raised on video games. When I first wrote the Everest case, some colleagues thought teaching leadership by discussing decision making on Mount Everest would never fly, particularly with an executive audience. That could not be further from the truth. Groups of executives connect with the Everest story, and they see the parallels to many business situations.

For instance, as they discuss the decision not to turn back from the summit — a decision that could have saved the climbers’ lives — executives often point out that they have failed to cut their

losses in crucial situations. They will say, “Look I’ve made a mistake like that; I’ve failed to ‘turn around’ and refused to cut my losses on a bad decision.”

When I first developed the Columbia multimedia experience, I taught the case to a group of executives from a pharmaceutical company. They recently had witnessed a crisis at their main rival, when the company failed to pull a drug quickly off the market after safety concerns arose. Immediately, they saw the parallels between drug safety decisions that they had to make all the time and the safety decisions confronting the NASA managers.

Preparing an executive group to work with a sim is important. You have to frame it for them and explain why it is valuable and why they should take a chance to engage in a rather unorthodox learning experience. If you do not get them ready for an unfamiliar learning experiment, they might say, “Oh, we’re just playing a game.” It’s important to note that learning objectives come first, and technology simply is the enabler. Technology might simply help us teach in a different way and achieve something that we otherwise could not do.

With the Everest sim, the technology allowed us to put participants in teams, in which members interacted around a set of decisions to climb the mountain. We embedded a series of challenges in which participants have to engage in good decision making around issues involving the health of a climber, weather on the

People say one thing and do another when faced with a real situation. With a sim, we can see how they behave and give them instant feedback to assess their actions and reflect on how they might improve.

DID YOU KNOW?

Will Wright, creator of the best-selling life-simulation games “SimCity” and “Spore,” reportedly got the inspiration to create the “The Sims” game — in which users create a virtual life for a family of people — after a massive firestorm destroyed his Oakland Hills, Calif., home in 1991.

Source: The New Yorker, 2006

students and executives. However, it is important to understand that these are not info-tainment games designed for passive viewing. Good simulations allow participants to create and own a powerful personal learning experience if they make the emotional and intellectual investment. Instructors do not just stick students in front of computer screens to play with a sim. It takes up-front investment to frame the goals for students, identify the relevant content and then energetically direct a discussion that identifies the core concepts.

A good sim can do some things that other teaching methods do not. The experience takes the participants out of their normal element, and as cognitive neuroscience researchers have discovered, novelty spurs the brain. The sims reinforce the power of experiential learning. It is one thing for people to read a case and

mountain and supplemental oxygen required for the final summit push.

Each climber possesses different pieces of information, but no one had the entire picture. In addition, each member has a different goal and a different reason for being on the mountain. As a result, each team has asymmetric private information and somewhat asymmetric goals, meaning they have built-in conflict, much like most teams at work. They have to grapple with the challenge of dispersed information and conflicting objectives as they try to solve tough problems. Powerful research shows groups do not discuss privately held information very well. Instead, they talk about the commonly shared information. Consequently, poor decisions are made.

At the end of the exercise, the simulation technology allows us to quickly see how each team and each team member performed. We also ask the participants to complete surveys about team effectiveness and the group decision process. The immediate feedback enables us to compare and contrast experiences during our debriefing, which drives a vigorous dialogue and debate about various leadership approaches.

People don't like feedback from a boss, of course, but in this feedback, they see the results of their actions within minutes. They can reflect and adjust their behavior. It's not like work in that the consequences are not as substantial. However, it does play to their competitive instinct. They get deeply involved, but they don't have a huge fear of making mistakes. They are more open to talking about their mistakes than they would be in a real work environment.

There is a learning curve for instructors who work with sims. When you give a lecture, you have a lot of control, and there is little unpredictability. However, when you use a sim, you have much less control. You set it up, the students have two hours to run it, and then you have an hour to debrief. You have a few minutes to look at the data, and the results are not going to be the same every time.

Thus, it can be more work at first to teach with a sim because you have to be ready for all these different paths with different personalities and skills in the room each time. That variance allows you to compare and contrast the results among various individuals and teams. Divergent results provide fodder for discussion and learning. You cannot have a formulaic lesson plan.

The worst thing you can do after people have gone through a sim is to put them through a rigid, preordained discussion.

If you don't let participants talk about their experiences and compare their assessments, you stifle learning. Thus, there is a fixed cost in getting yourself ready to teach through simulation. Once you do it, you get a

These are not info-tainment games designed for passive viewing. Good simulations allow participants to create and own a powerful personal learning experience if they make the emotional and intellectual investment.

long-term payoff. Whatever the content, whether it is marketing or operations or leadership, sims are natural experiments in group process. While you might have a primary objective of teaching about marketing, you inevitably will have an opportunity to teach about team dynamics and managerial decision making. Every sim, in essence, becomes a lesson in leadership.

What will you learn through simulations? Will you come away with a set of answers on how to act in a specific situation? No, that is not the primary goal. You will learn how to make strategic decisions rather than coming away with a set of prepackaged solutions to various management problems.

Management guru Peter Drucker once said: "The most common source of mistakes in management decisions is the emphasis on finding the right answer rather than the right question." Through simulations, we constantly are searching to build students' capabilities to identify the right questions to ask in an uncertain and dynamic situation. We want to help them become comfortable grappling with ambiguous data, as well as situations in which no single correct answer exists, much like the circumstances managers find themselves in everyday. **CLO**

Michael A. Roberto is a professor at Bryant University and author of Know What You Don't Know: How Great Leaders Prevent Problems Before They Happen. He can be reached at editor@clomedia.com.