Simulation Stimulation
The Rise of Rank-Ordered, Consensus-Building Simulations

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Summary

Simulation activities are an important mainstay in the realm of instructional methods. This article examines two types of simulations (process and content) that can be used to examine behavioral outcomes and their relationships to real-world situations. The relevance of the debriefing session is explored in supporting the simulation as a learning event.

What are simulations, and what makes them valuable as a learning tool? Our early experiences as children start us on the road to learning through play. Play is an essential part of our development, and as adults, we incorporate our early learning to create a manageable version of the real world in which we can practice behaviors and learn from our mistakes. A game will be interesting to adults if it provides a challenge and, therefore, an opportunity to overcome an obstacle with real feelings of success and real learning, even if the situation is virtual.

In essence, a simulation is a contrived situation that contains enough reality to induce a real-world response by those participating in the event. This simulated environment requires the participant to "play" a role, which produces certain actions and behaviors that can be compared to real-life situations. There are two types of simulations: those that pertain to the use of a machine or equipment and those that replicate a social or interpersonal interaction. It is the latter type of simulation that we will be examining here. These activities stress the complex, real-life situations and goals that organizations attempt to implement on a daily basis.

The Use of Simulations

Using simulation as a learning tool is not a new concept. The first war game was created in China around 3000 BC. Since then, war games have been used over the centuries to prepare leaders for the rigors of strategic conflict. Even the development of chess, one of the most successful games in history, was an attempt to simulate two warring armies. Most of the nations that participated in World War I used war-game simulations as preparation for the real thing. After World War II, with the development of the computer, more complex war simulations were developed.

As an outgrowth of war games, other types of simulated activities have entered the world of learning because they allow the learner to explore the elements of a system, change variables, and discover consequences without actually suffering real distress. In order to do this, however, it is important for the learner to understand the analogies between what happened in the simulated experience and what happens in the real world.

As early as 1957, the American Management Association (AMA) adopted simulation as a management development tool, with its Top Management Decision Simulation. Since then there has been a blossoming of simulations in business management programs around the world. So simulations have come of age. In this article we want to focus on a particular kind of simulation—the rank-order, team-consensus type of simulation that has an interesting evolution over the past fifty years.

Almost any simulation can be used as an assessment tool in two key ways:

1. Process: by focusing on social or interpersonal skills and group dynamics, such as assessing the relationship skills or communication skills of a person, or

2. Content: by focusing on teaching how to adopt or assimilate content into the behavior or skill that is being assessed, for example, using flight simulators to teach pilots to fly.

This article will explore both the process and content of simulations, although the focus will be limited to learning soft skills through rank-order team-consensus-building simulations.

Process Simulations

The purpose of this type of activity is to examine the flow of behaviors in a group, where the emphasis is as much on *how* things happen as it is on the final outcome of the simulated event. Group *process* is concerned with the dynamics of the

group: group norms and roles, leadership, communication, and dimensions of group effectiveness.

Within the larger context of group process, it is important to examine two distinct dimensions: (1) *task-oriented* process that contributes to task accomplishment and includes planning, goal setting, problem solving, decision making, creativity, and risk taking; and (2) *relationship-oriented* process that explores maintaining good working relationships within the group, including group cohesiveness, collaboration, trust, conflict management, and negotiation.

These activities fall within the category of social-system simulations that focus on interactions among people and the ways that one's beliefs, assumptions, goals, and actions may be hindered or assisted in interactions with others. The primary focus of such simulations is for participants to experience some of the dynamic social processes that are part of the fabric of organized social groups. Working through this type of learning activity can provide a group immediate feedback on how well group members perform.

The components of the process-oriented simulation are (1) a precipitating event, (2) complicating factors, (3) participant roles, and (4) context. All of these components interact with one another to set in motion the interactions among participants that are the core of the simulation. Outcomes depend for the most part on the interpersonal dynamics that evolve as the simulation progresses.

Process simulations provide the context of a plausible but imaginary situation in which group members are free to learn real lessons about how their behavior affects others. For example, the simulation *Common Currency: The Cooperative-Competition Game* (Ukens, 1996) presents participants with the scenario of a union of several smaller countries into a large republic that will convert separate currencies into one new shared system. The game exposes the players to the conflicting goals of cooperation and competition, while demonstrating the interdependence of groups within an organization. It is a lesson in both task and relationship processes because it places emphasis on not only the final result, but also on how these outcomes were achieved.

Working together to solve prescribed challenges, participants practice vital group-process skills that are reinforced through focused reflection and discussion. The participants can make generalizations in terms of attitudes, skills, concepts, paradigms, and so forth. Although the simulation might not be designed to provide learning directly, the debriefing segment of the activity allows for learning to take place.

Survival-type simulations constitute one type of process simulation that is often used in team-building situations to explore the concepts of synergy and consensus decision making. Teams experience first-hand the exciting benefits of group thinking and problem solving. The earliest survival simulation was *NASA Moon Survival*

Task, developed by Jay Hall in 1963 as part of his doctoral dissertation, and also published later as *Lost on the Moon*.

In the late 1950s, Hall was a graduate student at the University of Texas and studied with Robert Blake and Jane Mouton, who developed the Managerial Grid. Blake and Mouton used the film *Twelve Angry Men* as a "predictive tool" by stopping the film mid-track, after the first vote by the jury is cast, and asking their students to predict the order of the next eleven votes of the jury. The point was to see how well individuals and teams could second-guess or predict what will happen, based on their reading of the characters so far into the film. Hall became interested in using this "ranking" technique and began to develop it to examine the decision-making process that might occur in a space capsule, the effect of disagreements among the crew, and how the disagreements might be resolved.

Hall first sent his list of fifteen items to be ranked in terms of usefulness to the astronauts at what is now the Johnson Space Center. The astronauts, according to his colleague and fellow graduate student Warner Burke, were far too busy, so the list was passed to the scientists and engineers at NASA, who provided even better logic for the ranking exercise, and so *NASA Moon Survival Task* was launched, so to speak. Ever since then, survival simulations have remained a very popular team-building tool among corporate trainers and school educators.

There are typically two general approaches to creating consensus survival simulations: (1) *priority-setting simulations*, where participants rank order a list of available items necessary for survival in a particular environment, and (2) *decision-making simulations*, in which participants are presented with situational dilemmas that require the selection of the best choice of action from among several options.

An example of a priority-setting simulation is *Adventure in the Amazon* (Ukens, 1998) where fifteen items must be ranked in order of priority for survival after a plane crashes in the jungle. A more humorous example of a priority-setting simulation, provided by Dale Crossman (formerly of NASA), is to photocopy the Whitman chocolate sampler sheet and have participants rank the chocolate samples from most to least chosen, thereby testing the predictive power of individuals and teams in knowing chocolate preferences.

As an example of the decision-making variety of simulation, *Trouble on the Inca Trail* (Ukens, 2005) requires participants to make choices on the best actions to take in twelve survival situations involving the desert, mountain, and jungle regions of Peru.

Christopher Novak, a consultant with The Summit Team in Marcellus, New York, often uses simulations in his training sessions. He explains that this type of activity helps stimulate real-world behaviors around a neutral topic in which everyone can engage. His impression is that participants generally enjoy these activities because they offer a free-flowing learning environment that can draw in the vast majority of people. People seem to like the "brain-work" associated with the

simulations—the opportunities to apply logic, knowledge, and even educated guesses to a process of finding a workable solution.

Content Simulations

Many of the practitioners who designed process-oriented simulations, over time, became somewhat disillusioned with the "content free" or "content-lite" aspect of these exercises and have tried to adapt the framework to teach content as well as process. An example of a content-oriented simulation is *Lost in Cyberspace* (Richter & Willett, 2002), which was developed for Wharton's MBA orientation retreat. Wharton had been using *The Desert Survival Situation* (Lafferty, Eady, & Pond, 1970) for a number of years, but grew tired of it and commissioned a new simulation to also address the growing issue and challenge of global virtual teams.

Unlike most of the "lost"-type simulations, which address problem solving in a physical survival setting, *Lost in Cyberspace* was framed in terms of current business survival and set out to teach some content about the "best practices" of global virtual teams. The simulation scenario involves trying to win an e-commerce project and thereby prioritizing a mix of technology, information, and team or human factors. It also employs the method of individual ranking, followed by team ranking (based on group consensus), then followed by revealing the target rankings, which in turn provides the scoring for the individual and team decisions. In the debriefing, the content is reviewed, which addresses the learning of global virtual team best practices, but the process (especially how decisions were made by each group) is also debriefed, making for a more balanced simulation.

Other examples of "soft" content simulations hark back to the use of Hollywood movies to provide the "case" for review. In the 1980s, as part of leadership development programs, Marshall Goldsmith, then with KGB (the now dissolved consulting firm of Keilty, Goldsmith, and Boone), used to screen *The Bridge on the River Kwai* as the basis for studying leadership. Ratings would be made, individually and then in teams, on leadership characteristics as portrayed by the two leaders in the movie. These ratings were then compared against target ratings based on an objective (as much as possible) reading of the movie. QED Consulting developed similar simulations using the movies *Twelve O'Clock High*, *Hoosiers,* and *Gandhi*. In each case the leadership characteristics would be tailored to the wording of the leadership competencies of the organization undertaking the training. In this way it was almost like evaluating how well (or badly) this leader would work out if he were leading your organization. More recently, Hartwick Humanities in Management Institute (at Hartwick College, Oneonta, New York) began including the use of films as an exciting and innovative tool for learning about leadership. The Institute publishes

and distributes Hartwick Classic Film Leadership Cases® and related teaching notes for colleges and universities.

Debriefing Sessions

Regardless of the type of simulation used, the debriefing discussion that follows the simulation activity is critical to the learning process because its goal is to reflect on the relevant dimensions in terms of real-world situations. By carefully examining the participants' experiences through guided reflection, the facilitator moves the learning toward practical application.

A multistage approach is recommended, with each stage identified by a specific question. The main component of the debriefing session should examine three key areas:

- What happened?

- Why did it happen?

- How does this apply to the real world?

The facilitator should discuss both the process and the outcome of the simulated event, although the weighting of these two elements will be determined by the simulation design (primarily process-oriented, content-oriented, or balanced). Participants should be encouraged to reflect on how and why the outcomes occurred, examining the roles they played in determining the final results. This process of forced reflection and subsequent internalization of the possible learning points makes this type of experience worth the time, energy, and money expended by both the individual and the organization.

No matter how much time is devoted to the debriefing session, it is the part of the simulation process that is absolutely essential for learning to occur. The more elegant the design of the simulation, the longer the debriefing session will run compared to the actual simulation. It is also important to remember that, although the facilitator may have a specific intention in mind for the activity, participants may get something else out of the experience that goes beyond this initial objective. Therefore, participant feedback helps determine the actual direction and composition of the debriefing period.

The role of the facilitator is to guide the participants to insights by discussing, reflecting, and questioning what was experienced. Rather than telling the learning points of the simulation activity, an effective facilitator will guide the participants into individual awareness. A successful learning event is one in which the participants leave with at least one powerful and useful insight.

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