BUSINESS SIMULATION GAMES

A DESIGN CHECKLIST

> *"While the world becomes more enraptured by video and computer games, some businesses are finding that games can have a serious and important business purpose."*
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> *—Pixel Farm Interactive, 2009*

As Pixel Farm Interactive, a leader in the use of business learning games, puts it, "People are engaging in business simulation games to experience learning in a fun—and fundamentally different—way." Once a client has chosen to use a business simulation game as a learning method, the challenge becomes one of designing something that is fun, engaging, relevant, and that actually creates the desired learning outcomes.

MORE THAN A NEEDS ASSESSMENT

To design a business simulation game that changes the way people think and act on the job, the design team has to work through a lot of details. In addition to the usual learning needs assessment, designers need to consider the creative, technical, and cultural aspects of creating a game that will be engaging and fun, without being seen by the participants or the sponsors as inappropriate for the organizational culture. This checklist of questions and choices can be used as a guide to understanding the outcomes, content, and possible structure of the business simulation game.

Depending on the situation, many of these questions may have already been answered in some level of detail by the time that the decision to use a business simulation game is made. In order to make the most of the time and budget you have available, it is helpful to verify the initial needs assessment and get very specific about the details. This will help the team proceed with minimal need for changes as the project moves ahead.

WHAT DO WE WANT TO ACHIEVE?

A game can be about anything, but a business simulation game has a specific purpose. Define the learning purpose of the game, first. For example, the game might be intended to improve the data-based decision making ability of the participants. The answers to the questions below will tell the designers what they should design the game to do.

1. Question: Whose performance, specifically, concerns us?
2. Question: What business results, specifically, do we want to improve? What metrics or qualitative indicators will change, and how much?
3. Question: What do these people need to do differently on the job to demonstrate skill in this area? (Be specific)
4. Question: Why aren't they doing it now? (Do they know they have to? Do they know how to? Do they want to? Does the system encourage and support them?)
5. Question: What needs to change in order for them to achieve the desired results? How do we know that a change in this ability will yield the desired change in business results?

WHAT DOES SUCCESSFUL PERFORMANCE LOOK LIKE?

The designers need to put the right amount of detail into the business simulation game—enough to get people to work hard and learn things by playing the game, but not so much detail that the lessons to be learned are too hard to see. Answers to these questions will help the team design the rules, content, and scoring system for the business simulation game in a way that engages and makes sense to the participants.

1. Question: How can we tell when people are doing well with the targeted skill? What would we see as the skill is being used that would demonstrate the desired level of performance? (Specific examples are helpful.)
2. Question: How can we tell when people are not doing this well? What will we see when the skill is being used that should tell us that it is not being used as effectively as it should? (Specific examples are helpful.)
3. Question: What are some immediate indicators of a failure to use this skill properly? In other words, what would we see that tells us that the skill was not used effectively?
4. Question: What kinds of situations require your employees to use this skill? Give some specific examples that we might build into the simulation. What kinds of situations *do not* require this level of skill or capability?
5. Question: When people use this skill, what resources—information, tools, time, support—is available to them? For each situation we are looking at where this skill might be used, what are the most important things to know or do, and what role should this play in the simulation?

6. Question: What sort of information in these situations do people have to ask for, and what sort of information is usually given to them with the problem or the situation?

7. Question: What are some examples of the most common routine challenges that employees have to deal with in these situations?

8. Question: What are some examples of common complications that might arise in these situations? How should these be handled?

9. Question: What are some examples of special challenges or circumstances that occur rarely, but that can have a big impact on the situation? To what extent is it desirable, realistic, or practical to include some of these "special cases" in the game?

10. Question: What are some examples of things in the work flow or the environment that often distract people or get in the way of good performance in this skill area?

WHAT KIND OF GAME DO WE WANT TO PLAY?

There are two main kinds of business simulation games: (1) simulations based on an underlying financial or quantitative system model, and (2) simulations based on a set of challenging work-based scenarios. Both types have great value for learning purposes, but they differ in how they are designed and played. Answers to the questions in this section will help the team choose a simulation game design that will most effectively match the needs and expectations of the learner audience. The first two questions, in particular, are intended to help make the choice of whether to use a rules-based simulation or a scenario-based simulation for the game.

1. Question: Are all of the situations in which these skills are used similar enough that one single set of financial or quantitative rules could cover them adequately? (In other words, is this skill only used with one kind of general situation, like deciding whether to launch a new product or not?) If the simulation needs to cover a variety of situations or cases in which a quantitative model could not easily produce the desired results, then a rules-based simulation is probably not appropriate.

2. Question: What kind of game model seems most appropriate to represent the way this skill area works in the real organization? Consider the scenarios that participants need to face and find the best match to these (***non-exhaustive!***) examples:

    a. **Story Progression (Product Life Cycle Example):** In this game model, the participants follow the story as it develops from round to round, trying to maximize lifetime profit contribution, or some similar goal. Using a product life cycle example, the participants practice their skills choosing and then managing a set of product or service offerings. For a four-round, one-day business simulation game, it might look like this:

        i. Round 1. Given some starting information, participants evaluate a slate of new product or service offerings. They make GO/NO-GO decisions for different potential offerings and allocate resources to the products or services they feel will be successful. Participants may have to request additional information in order to make the best decisions. The decisions are scored, with feedback.

ii. Round 2. Given some additional information, participants evaluate the results of their product or service pilot testing and decide whether to continue with development and launch of the offerings and how to allocate resources. Participants may have to request additional information in order to make the best decisions. The decisions are scored, with feedback.

iii. Round 3. Given some additional information, participants deal with issues that arise during implementation by making further decisions. Again, participants may have to request additional information in order to make the best decisions, and decisions are scored before teams receive feedback.

iv. Round 4. Later in the life cycle of the same product(s), participants must make the decision to re-invest/refresh, continue, or retire the product or service offerings based on the information they have or can request. Teams may have to request additional information in order to make the best decisions. The decisions are scored and feedback is given.

b. **Variety of Challenges Progression:** In this model, the situations and challenges that participants face are not related to each other; each round presents different situations, decisions, or scenarios to handle. The cumulative scoring and engagement for this model are not as strong, but a wider variety of situations and types of skills and decisions could be covered.

i. Round 1. Given some starting information, participants are faced with a specific business challenge. Participants may have to request additional information in order to decide how best to proceed. The participants' performance or decisions are scored (typically according to "best," "good," and "poor" outcomes), with feedback.

ii. Rounds 2-4. Participants are faced with different challenges in each round. As in first round, participants may have to request additional information in order to get the best outcome. The performance is scored, with feedback.

c. **Adaptive Story Progression:** In this game model, the outcomes of each round determine what challenges the participants face in following rounds as a common business situation unfolds. Instead of following a single story, the participants essentially "write their own story" as they follow a branching tree of outcomes. This model often focuses on a change in business strategy, process, product/service mix, customer mix, or business model. The game model relies on an underlying web of consequences—each round's decisions affect the kind of decisions and the information available to the participants in the next round, and the final outcome of the simulation can vary considerably from team to team. (Note: This model takes more effort to build than the others. While the total detail and depth is the same as the other models for the same development budget, participants will see less of it on a single play through the game.)

i. Round 1. The participants receive starting information and are faced with a set of situation-specific choices (which may include strategic decisions, process decisions, resource allocation issues, and so on). Participants may have to request additional information in order to get the best outcome. The performance is scored, with feedback.

ii. Rounds 2-3. Participants receive different challenges, based on their performance and the outcomes they achieved in the previous round. They get new information and new options that correspond with the path they are on. This might be very different from what the team of participants at the next table is dealing with. Again, performance is scored, with feedback.

iii. Round 4. The situation comes to a climax, with the specifics determined by the outcomes that the participants achieved in previous rounds. Participants have a final opportunity to make crucial decisions that will decide the ultimate outcome of the situation. The decisions are scored, the results are revealed, and feedback is given.

iv. Debrief. A typical branching structure allows participant teams to end up in one of five "end state" outcomes. These range from "ideal outcome" to "good," "mixed results," "poor results," and finally the "worst case outcome." General scoring of points, "resource units," or some other measure can also be used to further enhance the realism and engagement along the way. Allowing each team to reflect on and understand how it got to the outcome it achieved and comparing results is a crucial part of the learning from the business simulation game.

3. Question: How close to the participants' current reality in should we make the game scenario? There is an optimal point where the novelty of a fanciful, fictional situation balances with the relevance of challenges that are similar to what the participants experience on a daily basis. The game ought to be different enough to be fun, and to prevent participants from relying on pre-existing knowledge and habits. It should not be so different that it is hard to make the connection between the business simulation game and the skill or capability as it plays out in real life in the client organization.

4. Question: What creative and fun suggestions do different members of the team have for the specific game scenario? (For example, do we want participants to run a business? Do we want them to use their knowledge and skills to save the world from a notional evil plot? Do we want them to solve a gripping mystery? There are many possibilities.)

5. Question: Given the available resources (timeline, budget, event logistics, approval and QA requirements, etc.), what is a reasonable approach to address the answers to the previous questions in a way that promotes real engagement and transfer of learning to the job?

SUMMARY

The purpose of exploring the questions, above, is to make sure that the design team has the information it needs to do a good job of following these simulation design principles.

SIMULATION DESIGN PRINCIPLES

- Make the simulation feel like real work
- Strip away excess complexity and focus on the key dynamic
- Make the situations, choices, and outcomes believable
- Allow participants' choices to influence the simulation outcomes
- Keep the rules in the background

Information from the three sections above will help shape the purpose, the details, and the structure of the business simulation game. With these elements identified, the design team, the project managers, and the various subject matter experts involved can work together with a shared understanding of the constraints and the goal.

ABOUT THE AUTHOR

Steve Semler is the Director of Simulation Design and founder of LearningSim. He is a learning and development leader with 20 years of experience in instructional design and design management. He has a background in learning psychology and significant experience in both education and business environments. He earned his B.S. in Psychology from the University of Wisconsin, his M.S. in Human Resource Management and Development from Chapman University, and is a Ph.D. candidate in Education with emphasis in Human Resource Development at the University of Minnesota. Steve co-developed the Simulation-Enhanced Learning method and Active Leader program with Cori Hill as a consultant at Personnel Decisions International in 1998. He was recruited by The Schwan Food Company in 2001 to help form a corporate university. His work in establishing e-learning, marketing, curriculum, and performance consulting strategies and processes resulted in three corporate university awards in the second year of the university's operation and Schwan continues to win ASTD BEST learning awards seven years later. He rejoined LearningSim in 2008. In addition to the many Fortune 500 firms for which he has done consulting work, he has work experience with Honeywell, the Minnesota Council for Quality, and the US Army. Contact Steve at ssemler@learningsim.net.

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