SECTION ONE

BUILDING AND BUYING THE RIGHT SIMULATION IN CORPORATIONS AND HIGHER EDUCATION TODAY

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FOUR TRADITIONAL SIMULATION GENRES

As anyone who's been to a "corporate training" conference can attest, that industry is a festering sty of bad design and shovelware, procured by pinheaded HR bureaucrats and produced by the lowest bidder. It makes the K-12 educational multimedia section look like a hotbed of cutting-edge innovation.

—J. C. Hertz, author of *Joystick Nation*

PEOPLE ARE *TALKING* A LOT about simulations. There are thousands of teams, task forces, dissertation committees, and ad hoc groups going on *right now* discussing simulations.

Over the last two years, I feel like I have addressed them all. The conversations range, from

- Extolling video games to
- Passing around vendor brochures about "learning by doing" to
- Recounting people-based role plays or early computer simulations from decades ago that have stuck with the participants

Take my word; we will need *all* of these perspectives before this journey is over.

THE FOUR TRADITIONAL SIMULATION GENRES

But let's start with where the early action is. Across corporations and universities, *four* different genres of computer-based simulations (Figure 1.1) cover most of what organizations are *actually implementing today.*

These *were* all innovative, groundbreaking, unpredictable approaches *five or ten (or even twenty) years ago.* And they have all evolved into safe, recommended, stable genres today.

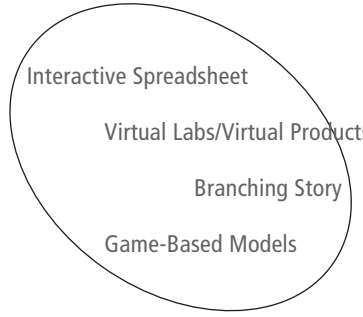
That does not mean that vendors or implementers are using my labels. In fact, many champions will fight these descriptions as not capturing the beauty, the majesty, and the "simulation-ness" of their approaches. These labels are a bit more sober, a little less "magic bullet-esque" and I hope more useful.

Branching Stories

In *branching stories,* students make multiple-choice decisions along an ongoing sequence of events around what to say to another person in a given situation. The decisions impact the evolution of the story, ultimately terminating in either successful or unsuccessful outcomes.

Their ease of use, ease of deployment, and content style make them highly appropriate for entry-level salespeople, call center representatives, freshmen, customer-facing retail positions, and entry-level managers. *Any* high-turnover position should be trained, although not exclusively, using branching stories.

Figure 1.1. The Four Traditional Simulation Genres.



Interactive Spreadsheets

Interactive spreadsheets focus on abstract business school issues such as supply chain management, product lifecycle, accounting, and general cross-functional business acumen. Students allocate finite resources along competing categories at successive turn-based fixed intervals, and each time they watch their results play out on dense graphs and charts. This is often done in a multi-player or team-based environment and often with facilitators.

The subtlety, unpredictability, and variability make them appropriate for training b-school students and high-potential supervisors through the direct reports to the CEO. They are often the cornerstones of multi-day programs to align a fractured department or organization by building shared knowledge and understanding.

Game-Based Models

With the goal of "making learning fun," students engage familiar and entertaining games such as *Wheel of Fortune*®, solitaire, or memory, with important pieces of linear or task-based content replacing trivia or icons. More diagnostic than instructional, game-based models nonetheless might be the technique of choice by traditional educators and training groups looking to quickly goose their reputation, student satisfaction, and even effectiveness. Game-based models also introduce, in the purest possible way, game elements that all educational simulation designers will need to understand in the near future.

Virtual Labs/Virtual Products

Virtual products and virtual labs focus on equipment, as straightforward as a camera, as complicated as a human body, or as immersive as a smoking car pulling into a dealership.

With *virtual products,* students interact with visual, selectively accurate representations of actual products without the physical restrictions of the reality. The interface aligns with the real function of the objects represented. Clicking the graphical "on" switch results in the lights turning on.

Virtual labs forsake some of the fidelity of virtual products. They focus instead on the situation where the product is being used.

The rigorousness, kinesthetic properties, and ease of deployment make virtual products and virtual labs perfect for a range of tasks, from

giving a potential customer or salesperson a feel for a product, to a lab, to an all-out, no-kidding, verifiable, comprehensive hardware certification program.

THE RIGHT ONE

Each of the four traditional simulation genres is a valid, important model of educational content. Each works.

But they are very different, with often opposite strengths and weaknesses, and therefore have different roles. They are far from interchangeable. Expecting one, and getting another, can cripple a learning program.

I can say at least two things about all four of these genres:

1. Almost any given teaching program would benefit from using *at least one* of the four genres described. I have not seen any exceptions.
2. Any organization with a significant internal or external teaching capacity *should be using all four frequently* and easily. If they do not, they simply no longer have a significant internal or external teaching capacity.

Finally, let me issue a perspective. These models, while surprisingly flexible and often remarkably subtle, are simple compared to what we will later discuss.

Again, if you want to think about the potential of simulations, rather than the dirty reality, skip this section and go straight to Section Two. But c'mon back. The most impressive next generation educational simulations will use techniques from these four traditional simulation genres. Knowing them, appreciating their appropriate use, is essential background for everyone who wants to shape the future.

Let's explore the four genres in depth.

COMING UP NEXT

What children's book series has inspired easy and accessible simulations, perfect for entry-level employees all over the world? And might people be the easiest thing to simulate?