



## “Thinking About A Simulation?” Revisited



*Kevin Gwinner (Professor of Marketing, Kansas State University) is a longtime LINKS Simulations user and a member of the LINKS Hall of Fame. This is an update/revisit of his Professor's Column in the December 2009 LINKS Newsletter.*

*“Tell me about using computer business simulations in a marketing course.”*

I occasionally get this request from my colleagues as many of them know that I have been teaching with simulations since 1997. My first response to such a request is typically to ask why they want to use a simulation. I ask this because I think having a clear and realistic idea about what you want the simulation experience to bring to your students is key to its success. There are certainly things that simulations can do for students, but also objectives where it is not the most appropriate educational tool. As such, having a good handle on what one wants to accomplish with the simulation is important. For me, one of my primary purposes in using a marketing simulation is to demystify basic market and product analysis and to overcome the sometimes irrational fear of numbers and financial statements that many marketing students have. Aside from this basic question about knowing what your simulation goals are, I break my advice down into things to consider before, during, and after the simulation experience.

### Before the Simulation Starts

Before the semester starts, you should plan to spend some time understanding how the simulation works. On one level I mean that it is important to understand how students will input decisions, access data, pay for the simulation, etc. But it is more critical to understand the relationships between the variables that the students will manipulate and the key outcomes, such as net income and market share, that they will be tracking (and perhaps evaluated on). During the semester, students will invariably want to know how a change to decision variable “A” will impact outcome “B”. The instructor will have to decide how much to tell them and how much to let them figure out on their own (which gets back to the course goals of the simulation), but the instructor should always have a good idea of what the relationships are among the variables in the simulation so that he or she can offer sound advice.

A second key to a successful simulation experience is to think about how the course content (perhaps embodied by lecture and readings) ties back to the students' simulation experience. This needs to be done before the course begins so that you can time the other experiences to correspond to what students are doing in the simulation. For example, in the simulation I most often use, students are first engaged in identifying customer needs, selecting target markets from this information, and launching new products. As such, I time my in-class lectures on these topics to be at the beginning of the semester. This has two benefits. First, it can provide them insight and context into what to consider

---

when making these decisions in the simulation. And, second, it allows for the simulation to reinforce what we are discussing in the course.

A third thing to consider before the simulation starts is how you will count simulation performance in the overall course grade. I am a big fan of making it a substantial aspect of the students' grade (at least 20 to 35 percent) so that they will take the simulation seriously and devote sufficient time outside of class. I also find that making the simulation a competition between student teams does wonders for increasing students' motivation to perform. In the past, I have taught a marketing management class where nearly two-thirds of students' grades were tied to the simulation in some fashion. About half of the students' simulation points came from their teams in-simulation performance (measured by net income) and the other half was based upon written assignments tied to their simulation experience. More recently I tried a "flipped classroom" approach in an MBA course with lectures being delivered outside of class via video, thus freeing up class time for content-supporting activities. One of the things I did with this extra class time was to add additional in-class exercises that used the simulation for their context and to give students occasional team meeting time in class where I could more directly interact with them as they made decisions. It has taken me awhile to evolve to this point, and I would advise new users to start off with a smaller, but still significant, amount of points attributable to the simulation and then to increase that amount over time as they deem appropriate.

## During the Simulation Experience

There are several things a faculty member can do to facilitate a successful simulation experience for students during the simulation. Of course, all students will be expected to read the simulation's written instructions. However, I find that additional class time devoted to introducing students to the simulation variables, how they will be graded, how to access and understand research information, and even where they input their variable changes is critical. My simulation introduction, which includes the simulation's variables, output, input screens, and initial financial analysis, takes about three to four hours of class time spread out over several class periods. I have taken Randy Chapman's advice and give a quiz on some of the aspects of the simulation. I make this an open-note quiz and distribute the questions a week in advance. My goal is that the students will all know the answers to every question and in looking them up, will learn a lot more. This is my way of making sure they know the "rules of the game" before we start playing and understand the key parts of the manual.

Secondly, I feel it is important that faculty be open to meeting with teams outside of class. Indeed, I think this is where a lot of the real learning takes place as it allows you to challenge your students' thinking and the rationale for the decisions that they are making in the simulation. I often meet with teams and individuals after class and during office hours to quickly help them with a particular question. You don't want them frustrated or misinterpreting information when a short conversation can often point them in the right direction. I find that even if a team is doing poorly relative to the competing teams, they will feel OK with this if they can make the connection between their actions and their results (and start thinking about a path to improvement). One of the worst things that can happen is for a student team to start believing, and then convincing the rest of the class, that the simulation is random and

---

lacks real world correspondence. By meeting with teams often during the semester, any issues like these can be sorted through and successfully resolved. That said, there is a fine balance that must be learned through experience regarding how much to tell students and how much to let them discover on their own.

I make it a point to talk about some aspect of the simulation in every class period. Once a week, I review results by showing graphs in class that illustrate team progress on key results such as market share, net income, and revenue. This gets students excited about the simulation and they are anxious to see these results in class. The leading teams get some recognition and those lagging behind become motivated to improve. Other times, I will take 5 minutes to introduce a research report I feel is being underutilized or might be useful in the near future. I also like to spend some time talking about things in the news that relate to the simulation as this can help give the students' experience some additional context. For example, a company that is thinking about launching a flanking brand into an existing market might illustrate a real world issue that a simulation team is also wrestling with at the time. The key point here is that making the simulation a part of each class period, even if only 5 minutes, will keep the students engaged and thinking about their company.

Finally, and this is very important to a meaningful simulation experience, you must encourage fact-based decision making. In most simulations, teams are responsible for making decisions, but not for justifying those decisions. The real learning in simulations comes from an iterative analysis–decision–results cycle. When done right, students learn from their mistakes and from their successes and are able to gain valuable insight into marketing phenomenon. When done wrong, students guess about what they should be doing in the simulation, they do poorly (or every once in a while guess correctly and do well), and don't learn much. Encouraging students through your advice, assignments, or even "threats" to make decisions based upon feedback from the simulation will enhance their experience. One approach to this is to require student teams to hand in a list of their decisions each round with justification about the changes to any decision variables (e.g., why advertising \$ went from \$X to \$Y). My thought would be to do this for the first few rounds until you felt comfortable that their decisions had reasonable logic behind them. Such an assignment would be a more detailed complement to the LINKS After-Action Review form that can be required to be turned in to the instructor following each round.

## After the Simulation Ends

Simulations can be played individually, but I feel that more learning takes place in a team setting where students can bounce ideas off of each other and practice using their persuasion skills to convince their teammates that their approach is superior to other alternatives. Of course, this means that students must be held accountable to each other and the professor. I am an advocate for end-of-semester team member evaluations that are structured in such a way that the individual student can ultimately earn more points than the team score (or fewer) based upon his or her actions over the course of the semester. I also believe in Randy's firing memo approach at the start of the course to get teams started thinking about what it means to be a team member and to set the expectations for team membership

---

from the start. Recently, I have also been administering a mid-semester peer review and self-assessment to proactively head-off team issues that might arise, before they become critical.

Because decision rounds come quickly and there are typically other elements in the course, I find that an end-of-semester presentation is important to allow student teams some time to reflect upon what they have done or perhaps to think about what they would do now that they know what they know. I have used retrospective types of end-of-semester assignments where students reflect on their decisions. But I have also used more forward-looking marketing plan assignments where they assume the role of a new company entering the existing industry. In this forward-looking approach where student teams take the role of a new firm entering the market, I keep the students in the class engaged during the presentations by tasking them with evaluating the other team presentations and at the end playing the role of a venture capitalist by allocating \$100 million between at least two teams (not including their own). Teams enjoy competing to see who can raise the most VC money. Both retrospective and forward-looking assignments offer the students an opportunity to reflect on what they have learned over the course of the semester. This is important in simulations as there is not a “list” of subjects covered as one might find in a textbook. As a result, students may need some guidance to help them understand what they have learned through their simulation experience. I find that end-of-semester presentations/reports are helpful in this regard.

All in all, I have enjoyed working with simulations in my marketing courses. I have used them in three different courses so far, and my students always report that they enjoy the experience. However, there are many factors for faculty to consider in their decision to adopt a simulation in their own course. I hope the information I have presented above will be useful in your deliberations.