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Best-Practice Teaching With Business Simulations

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"I hear and I forget; I see and I remember; I do and I understand." - Confucius

Successful teaching with business simulations is challenging, even for experienced instructors. As used here, the term "business simulation" implicitly includes the adjectives large-scale, web-based, competitively-dynamic, and team-based:

- "large-scale" implies a large scope with many (e.g., more than 100) decision variables in each simulation round
- "web-based" references simulations delivered via the internet with an internet browser used for inputs and output retrieval
- "competitively-dynamic" denotes that simulation firms are directly competing with other managed simulation firms in one or more industries (i.e., computer-managed firms are not present)
- "team-based" denotes that simulation firms are managed by teams of (three to five?) students.

Drawing on simulation design experience, extensive personal teaching experience in classroom-based and distance-learning modes in degree-granting and executive education programs, and coaching experience with more than four hundred instructors and indirectly with their 90,000+ students over the last twenty years, this White Paper summarizes best-practice design and execution insights for successful simulation-based courses.

Best-practice teaching principles and practices for business simulations may be conveniently organized in a time-series framework:

- Course Design Best Practice
- Pre-Event Best Practice
- Within-Event Best Practice
- Post-Event Best Practice.

COURSE DESIGN BEST PRACTICE

Bringing the Simulation Into The Classroom

The business simulation experience exists within a course; a course isn't exclusively about a business simulation. Thus, the greatest single teaching challenge is to embed the simulation into the course.

Best practice brings a business simulation into class sessions as the simulation relates to a class-session topic. For example, regular 10-15 minute class-time segments can explore and spot-light aspects of the business simulation. Examples of such just-in-time teaching include a key table or exhibit from the simulation manual, a particular simulation financial report, or a particular simulation research study or closely related set of simulation research studies.

Performance Assessment

Course design includes student assessment. Best-practice teaching includes:

- Some grade allocation to within-simulation performance, but this should be a minority of a course's simulation-based grade.
- The majority of a course's simulation-based grade should be allocated to team-based written reports and presentations.

In what is principally a team sport, best-practice business simulation teaching includes individual evaluation elements. Some possibilities are:

- In-Class Pre-Event Quiz and Surprise Simulation Quiz(es)
- Written Assignments/Memos/Questions:
 - Within-Simulation: "Write (In Detail) About Something Really Useful That's Not in the Simulation Manual and Not on the Simulation Website"
 - Post-Simulation: "Advice To My Successor" or "What I Learned Via the Simulation"
 - Simulation-Specific Examination Questions
- Within-Team Peer Evaluations ("*allocate a \$100K bonus to your management teammates, excluding yourself; your bonus is based on what your teammates award you*")

Instructor As "Coach"

Simulations place the instructor in an on-going within- and outside-of classroom coaching role, in contrast to the traditional "front-of-the-classroom"

lecturing instructor role. This coaching role may be the best part of the instructor's simulation teaching experience. It's an on-going, hands-on, consulting-oriented business management laboratory.

PRE-EVENT BEST PRACTICE

Team Sizes

Four to six firms in a simulation "industry" (with multiple, independent industries in larger-sized classes) and team sizes of "about" four members are good guidelines. Four-member teams are sufficient human resources for the task at hand, while not being so large as to unduly stress students in effectively managing themselves and their teams.

Several other considerations arise in choosing team sizes in business simulations:

- Team sizes, number of teams, and number of industries are interrelated. Smaller team size leads to more teams and possibly to more industries. By using smaller teams and more of them, multiple industries with five to seven teams each might be created.
- In academic degree-granting programs, part-time students may have difficulty arranging conflict-free outside-of-class meeting times. This argues for smaller-sized teams when part-time students are involved, compared to classes with full-time undergraduates or full-time MBAs.
- As a practical teaching matter, fewer teams and fewer industries are generally more time-efficient for course instructors. Thus, most instructors would probably have a natural bias toward larger-sized teams and fewer industries.

Clearly, there are many trade-offs associated with team sizes, number of firms, and number of independent/parallel industries in business simulation events.

Team Formation

While many instructors adopt the expedient approach of requiring/permitting students to form their own business simulation teams, best-practice teaching has the instructor forming teams based on background information provided by the students (including confidential-to-instructor "vetos" of up to two class members with whom a student doesn't wish to be teamed).

Instructor-formed teams offer plentiful benefits:

- It's realistic (there's usually no choice in team assignments in working-world teams).
- It's equitable (everyone has the same chance of being teamed with "friends" and "strangers").

- It's efficient (equal-sized teams are conveniently created by the instructor and students don't have to worry about finding a team).
- It's diverse ... diverse teams can be created across student backgrounds, majors, native English-speaking status, employer, and gender.

WITHIN-EVENT BEST PRACTICE

Practice Rounds?

Some instructors prefer to have one or more practice rounds at the beginning of a business simulation event. Practice rounds permit students to become familiar with the simulation in a low-risk fashion without their initial decisions (and possible miscues) being held against them in performance evaluation.

There are, however, disadvantages associated with practice rounds.

- First, practice rounds encourage students to think of the business simulation as being a "game" rather than treating it as a real management challenge. Instructors are always wise to repeatedly encourage students to treat the simulation as a real business at all times.
- Second, the presence of practice rounds may encourage some students to ask for "do-overs" if something unfortunate/bad/unexpected happens in a simulation event. This is decidedly not real life, since real life doesn't permit "do-overs."

The alternative to practice rounds is to selectively disable/deactivate parts of the business simulation initially, while students work through the early phases of the simulation's learning curve. Then, by activating these parts as the simulation event evolves, students face an increasing challenging business environment. If you're considering a business simulation that doesn't offer such selective use of parts of the simulation initially, switch to a simulation that does!

Private Presidential Review Meetings

The most important within-event best-practice in teaching successfully with business simulations is scheduling private presidential review meetings with the teams. These are private, pre-scheduled, 30-minute meetings with each team to permit the instructor to review a team's business and performance, to answer team members' questions, and to sense the progress that teams are making in the simulation. This is a "one-with-a-few" style of teaching/coaching, rather than a "one-to-the-masses" lecture-hall style of instruction.

Presidential review meetings are private meetings (i.e., instructor and one team only present) due to the business simulation's competitive nature.

Presidential review meetings provide a different kind of powerful teaching/learning opportunity (instructor as coach) at key points during the simulation event. They simulate business review meetings with a "boss" or senior management official.

Re-assigned class time is recommended for presidential review meeting scheduling, with teams not meeting with the instructor using that time for their own private firm deliberations. Meeting schedules may have to extend beyond class time, due to the number of simulation firms involved in a particular instructor's course.

In shorter events, a single round of review meetings might be scheduled, perhaps just after the second scheduled decision round. In longer events, several waves of presidential review meetings might be scheduled with the second round of review meetings occurring at about the event's mid-point.

Pre-scheduled meetings permit teams to pick their own preferred meeting times from a range of available meeting times. Classroom-hours meeting times might be rotated around all teams, if multiple presidential review meetings waves are held. With a single set of presidential review meetings, assign classroom-hours meeting randomly.

Formats for presidential review meeting include:

- No Student Preparation Required [Not Recommended]: Just discussion and Q&A.
- Some Student Preparation [Recommended]: Team members collaborate and submit (via e-mail) questions/issues to be discussed. Submissions are due at least 12 hours before the scheduled presidential review meeting to permit the instructor time to review and prepare.
- Substantial Student Preparation [Optional]: SWOT Analysis. Submissions due at least 24 hours before the scheduled presidential review meeting to permit instructor review and prep.

Some potential instructor questions to pose during presidential review meetings include:

- What are the largest problems facing your firm?
- What's your best and worst team decision to date? Why?
- Who is the best performing competitor in your industry? Why?
- To your customers, what differential advantage does your firm offer compared to competitors?
- What are your most/least important markets?
- How is your firm organized (e.g., by function, by region, as a committee of the whole, etc.)? Is

this organization arrangement "best" for the problems and challenges facing your firm now?

The likely outcomes arising from presidential review meetings include:

- For Students: (1) Greater emphasis on research study needs going forward. (2) More attention to issue identification and prioritization. (3) More focus on the really important issues. (4) More systematic attention to within-team division of labor and responsibility assignments.
- For Instructors: (1) Deep appreciation for team and individual-student progress. (2) Ideas for in-class discussion and tutorials, based on common issues and concerns arising across teams. (3) Follow-up meeting scheduling for "lost"/"deeply troubled"/"unprepared" teams.

Variations on private, single-team presidential review meetings can arise in special situations.

- With many industries in very large courses, schedule joint meetings with each firm "1" from all industries meeting with the instructor simultaneously. Repeat for firm "2," etc. Only non-competing teams from different industries are jointly meeting with the instructor during these pooled presidential reviews.
- In distance-learning contexts, actively use teleconferences for presidential review meetings. Online chat sessions are possible, but a free-flowing, in-depth discussion is more likely to occur within a teleconference setting.
- Schedule automatic presidential review meetings immediately with any firm with successive rounds of negative net income.

Coping With Price Wars

The root cause of price wars in business simulations is undisciplined students who don't attend to the profitability consequences of their customer-facing programs (especially with regard to pricing decisions, brand configurations and associated variable costs, and margin management).

Excluding gross errors in inputs, there are two principal paths that lead to price wars.

- First, brand reconfigurations occur which dramatically increase variable costs without corresponding increases in prices. Margin reductions mean that profitability is difficult or impossible to achieve, even with "hoped-for" (fantasized?) large increases in volume.
- Second, students mindlessly pursue volume without regard to profitability, ultimately leading to competitors feeling compelled to match low prices to maintain their own sales volume.

Good instructor practice in the face of price wars includes initiatives, efforts, and actions before- and after-the-fact.

Before-The-Fact Actions:

1. Forcefully advise students (in your syllabus) that profitability matters! Remember the “Klingon proverb”: “Volume without profit has no honor.” For within-simulation grading, include the proviso that “consistent” lack of profitability will lead to a within-simulation grade of no higher than “average” regardless of a firm’s standing on any other performance metric.
2. While not prohibiting price decreases, adopt the protocol that students must seek your “CEO” approval for price reductions. This approval requires a “modest” pro-forma financial analysis of predicted short- and long-run profitability after a proposed price decrease. Carefully review the industry demand and market share assumptions and forecasts included in such a pro-forma financial analysis. Question students on the empirical basis for such industry demand and market share assumptions and forecasts (i.e., which research studies were used to form such assumptions/forecasts?). Also, query students about their assumptions regarding how competitors will react to a price reduction.
3. Activate additional brands and regions/markets as the event unfolds, to provide plentiful niche and growth marketing opportunities. Additional regions provide growth opportunities for everyone, even lagging firms. And, growth opportunities tend to discourage price wars.

After-The-Fact Actions:

1. During regularly-scheduled private “Presidential Review Meetings” throughout your event, emphasize profitability in your discussions with your students, particularly for lagging firms. Quiz students regularly on their plans to improve long-run profitability.
2. Require that any unprofitable firm after any simulation round schedule an immediate private “Presidential Review Meeting” with the instructor to review the firm’s performance. Alternatively, require that any unprofitable firm must respond to the following memo from the “CEO”: “Profits are unacceptably low. Please provide a clear, fact-based plan for dramatically improving profitability soon. Management teams of firms unable to generate profitability are subject to termination/firing. No one wins in business by being the last to go bankrupt!”

POST-EVENT BEST PRACTICE

Before “closing down for the season” and moving on

to the next activity set in an instructor’s busy life, simulation instructors should share their feedback and any pertinent student feedback with the simulation provider. A continuing feedback stream is an important driver of any simulation’s author’s continuous improvement efforts. Do contribute to such continuous improvement efforts by providing your own (and your students’) feedback.

Please consider sharing “interesting” documents from your simulation event with the simulation author. “Interesting” documents might include meritorious student reports/presentations as well as an instructor’s syllabus and assignment, report, and presentation instructions to students.

Lastly, best-practice simulation usage concludes with instructor “notes to myself about the next simulation usage occasion.” Since some time may pass before the next simulation usage occasion, it’s important to create relevant notes about intended changes in the next simulation event based on the experience of the just-completed simulation event.

CONCLUDING REMARKS

Embracing these course design and execution best-practices with large-scale, web-based, competitively-dynamic, team-based business simulations improves the chances of a good/better teaching and learning experience for instructors and for their students.

Undoubtedly, these best-practice ideas aren’t the only “bests” ... but they do represent an excellent starting point for improving business simulation teaching and learning.