Simulations challenge and engage learners through interactive online experiences that enable them to translate knowledge into action. Through the use of collaborative interfaces (e.g. Zoom, Google Hangouts, Skype, etc.), virtually-run simulations can convey concepts in a user-focused and friendly environment with as much effectiveness as an in-person classroom.

**Asynchronous Single-Player Simulations**
Asynchronous single-player simulations are most easily adapted for virtual delivery. These simulations can be assigned and played by students individually, or in some cases in small groups, ahead of the designated online class periods. All simulations feature comprehensive teaching notes, technical guides, and flexible setup and customization options for instructors to adapt their usage based on both teaching objectives and delivery constraints.

**SAMPLE CLASS PLAN**
- Introduce and assign the simulation by email or at the end of the previous class session (5 minutes)
- Play the simulation outside of class time (20–90 minutes)
- Debrief with students during online class time* (20–90 minutes)

*Depending on your learning objectives, your debrief could be as short as 20–30 minutes or as long as 90 minutes.

**Asynchronous Multiplayer Simulations**
Many asynchronous simulations are multiplayer, meaning the entire class does not have to play simultaneously, but a specific team of students within a class does. Each student will play on their own device, so students on the same team in a multiplayer simulation do not need to be physically together while playing, but they do need to be online at the same time. This will take some coordination on the part of the students.

**SAMPLE CLASS PLAN**
- Introduce and assign the simulation by email or at the end of the previous class session (5 minutes)
- Assign students to teams, inform them which students are on a team together, and ask the teams to coordinate a time to play the simulation prior to the set class debrief.
- Play the simulation outside of class time (20–90 minutes)
- Debrief with students during online class time (20–90 minutes)

**Synchronous Simulations**
Some simulations can be used in an online setting only when all students are online at the same time because synchronous play is an integral part of the experience. For these simulations, groups are formed just before the simulation play begins and students do not communicate with each other except through the simulation.

**SAMPLE CLASS PLAN**
- Introduce and assign the simulation by email, at the end of a previous class session, or at the beginning of the class time in which they will be playing (5 minutes)
- If using a multiplayer simulation, make sure to assign students to teams within the simulation before class. All students must be assigned to teams before they log in.
- Play the simulation when all students are “in” your online class (20–90 minutes)
- Debrief with students during online class time (20–90 minutes)

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Preparing and Running the Simulation

Some Differences When Running Simulations Online

BEFORE RUNNING THE SIMULATION

- Simulations are best accessed using a high-speed internet connection and a modern web browser. When all students are playing outside a physical classroom, it is critical that they check and troubleshoot their system compatibility: http://forio.com/hbp-support/#check/simulations/all.
- Remember to set up and open the simulation to your preferred state (open, prepare, tutorial only, etc.) prior to introducing the sim. Make sure to include a deadline for completion if students are playing outside class time, and stress the importance of completing tutorials and reading instructions.
- For multiplayer simulations, it can be useful to assign a team leader who owns team play scheduling. In addition to communication platforms within the simulation, teams can use teleconference or webinar platforms to communicate with one another.
- For single-player simulations, collaborative work can be built into the experience by assigning study group reflection activities to be completed outside of the classroom.

DURING THE SIMULATION

- Instructors can track student progress on the facilitator side throughout play and will see all results when the simulation is complete.
- Some students may experience login errors or request that a simulation be reset during play; instructors should be prepared to help students should they run into issues. Details for how to address technical issues can be found in the technical guide section of each specific simulation’s teaching note, and customer services is available 24/7 for any questions you have.

AFTER RUNNING THE SIMULATION

- Instructors can access and customize debrief materials and can share them with their students as desired. Be sure to download class results slides and run data or be prepared to share your facilitator screen during the class debrief.
- Instructors can increase interactivity among students during an online debrief in several ways, including the following:
  - Ask students or groups to report on assigned reflection questions or specific aspects of the simulation.
  - Warm- or cold-call on students to share experiences and discuss the results of their individual experiences with the simulation.
  - Leverage interactive polls and available chat functionality in your online classroom to allow students to compare and contrast experiences.

More Resources

To learn more, view available simulations and resources on the Educator Simulations page: https://hbsp.harvard.edu/simulations/

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Simulations Available from Harvard Business Publishing

Asynchronous Single-Player Simulations
- Change Management Simulation: Power and Influence
- Data Analytics Simulation: Strategic Decision Making
- Family Business Simulation: Honey Heritage
- Financial Analysis Simulation: Data Detective
- Finance Simulation: Capital Budgeting
- Global Supply Chain Management Simulation
- Innovation Marketing Simulation: Crossing the Chasm
- Innovation Simulation: Breaking News
- Macroeconomics Simulation: Econland
- Marketing Simulation: Using Conjoint Analysis for Business Decisions
- Marketplace Simulations: Business Fundamentals - Bikes**
- Marketplace Simulations: Conscious Capitalism - Bikes**
- Marketplace Simulations: Introduction to Marketing - Bikes**
- Marketplace Simulations: Strategic Marketing - Bikes**
- New Venture Simulation: The Food Truck Challenge**
- Operations Management Simulation: Balancing Process Capacity
- Operations Management Simulation: Benihana
- Operations Management Simulation: Inventory Basics
- Operations Management Simulation: Multiple Server Queues
- Operations Management Simulation: Push vs Pull Production
- Operations Management Simulation: Quality Analytics
- Operations Management Simulation: System Utilization in Service Management
- Organizational Behavior Simulation: Judgment in a Crisis
- Organizational Design Simulation: Evolving Structures**
- Pricing Simulation: Universal Rental Car
- Project Management Simulation: Scope, Resources, Schedule
- Strategic Innovation Simulation: Back Bay Battery**
- Strategy Simulation: Value Champion
- Working Capital Simulation: Managing Growth

Asynchronous Multiplayer Simulations
- Finance Simulation: M&A in Wine Country
- Finance Simulation: Blackstone/Celanese
- Leadership and Team Simulation: Everest
- Marketing Simulation: Customer Centricity
- Strategy Simulation: The Balanced Scorecard

Synchronous Simulations
- Asset Market (Bubbles and Crashes)
- Cesim OnService: Small Service Business Management Simulation
- Cesim SimFirm: General Business Management Simulation
- Cesim Global Challenge: Strategy & International Business Simulation
- Cesim Hospitality: Hotel and Restaurant Management Simulation
- IT Management Simulation: Cyber Attack!
- Marketplace Simulations: Advanced Strategic Marketing – Bikes
- Minimum Effort
- Organizational Behavior Simulation: Leveraging Networks
- Principal-Agent
- Production, Entry & Exit
- Stackelberg Competition
- Strategy Simulation: Competitive Dynamics and Wintel
- Strategy Simulation: The Negotiator’s Dilemma
- Supply Chain Management Simulation: Root Beer Game
- Trust Game
- Ultimatum Game
- Value Proposition Simulation: Surgical Robotics

Simulations Not Ideal for Online Play

Synchronous play, extensive coordination needed, can be confusing to students in an online environment.

- Entrepreneurship Simulation: The Startup Game
- Global Collaboration Simulation: Tip of the Iceberg
- Marketing Simulation: The Positioning Game
- Negotiation Simulation: OPEQ

**These simulations allow for optional team play.

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