Waterloo ExL Community of Practice: Games and Simulations in the Classroom

The Games and Simulations in the Classroom Community is led by Joel Blit, Assistant Professor in the Department of Economics. As an Experiential Learning Lead, Joel recognized how including games and simulations in a course can engage students in a dynamic way. Games and simulations can add an experiential component to courses in technical fields, large classes, and online courses, often with limited required resources.

From micro games to entirely gamified courses, each community meeting was hosted by a faculty member using a game or simulation within their course. Each presenter described how their game applies to course content, led the community through a variation of the game, and concluded with a debrief on the benefits and challenges associated with incorporating the game into their course. The findings of the Community are below.

The benefits of using games and simulations:

- Increases peer interaction
- Sets the tone for participation in the course and interaction among students
- Provides concrete examples of theoretical concepts
- Fosters a deeper understanding/assimilation of concepts
- Appeals to diverse learners
- Results of the game are immediate feedback to the students; they know right away if they understand the concept or not
- Fun way to teach and learn, keeps the content fresh for the instructor

The challenges of using games and simulations:

- Can require additional work, time, and resources to prepare
- Something else must be removed from the course to make space for the game
- Less impactful if students aren't prepared (i.e. haven't done the readings)
- Finding the balance between games/simulations that are simple enough to be accessible and fun, but challenging enough so that students remain engaged and learn
- Novel games, such as a Jeopardy game for exam review, should only be used sparingly to be effective (once or twice per term)

The opportunities associated with using games and simulations:

- With the rise of gamification, there is likely something existing that applies to your discipline – search online or through networking with instructors in your field
- In some cases, once the game is designed you can use it multiple times without the additional work
- Consider creating a story board for the emotional journey for your course, along with mapping the learning outcomes
- Students are motivated to win the game, not necessarily for a prize

Questions[1] to consider when integrating a game or simulation in your classroom:

- What learning outcome(s) does the game/simulation address?
- What concepts (for example, theories, methods, models, content) will students use in the game/simulation?
- How does the game/simulation relate to other aspects of the course? Does the game illustrate concepts/questions that you will be addressing theoretically during the course?
- Is the game fun?
- What are the logistics of the game? Can the game/simulation run effectively in the assigned classroom (for example, can students easily move around if required in the game)?
- Does the game/simulation require materials or software? How will I obtain these resources? Do I need additional support?
- How are students involved in the game/simulation? Will every student get an opportunity to participate or only a select group while the rest of the class observes? Can you run the game give your class size? Is there an option for students to opt-out of the game/simulation? How does each role change the experience for each student?
- What is the instructor's role during the game/simulation?
- How are the students prepared for the game/simulation? How will I set expectations for students?
- Is there an opportunity for the students to debrief from the game/simulation? When does the debrief occur? Describe how the debrief is facilitated (for example, in-class, assignment, or online discussion).
- Are students graded or is there an assessment associated with the game/simulation? If so, how much is the assignment worth? If the game/simulation is worth too little, students may not take it as seriously. If it is worth too much, students may find the grading scheme unfair, particularly if the game has elements of luck.

[1] Questions are adapted from the *Waterloo ExL Institute* and the *Waterloo Assessment Institute Guide for Participants*.