



LGST/OIDD 240: Gamification for Business

Spring 2016, 1 cu

MW 9:00-10:30am

Overview

Gamification is the application of digital game design techniques to business and other domains. Video games are the dominant entertainment form of our time because they are powerful tools for motivating behavior. The structural elements of these games—such as points, leveling systems, achievements, and quests—can be applied to many business processes. Firms can also learn from the design strategies of game developers (for example, recognizing what kinds of experiences different people find fun or engaging) and from relevant psychological insights about behavior and motivation.

Companies today are incorporating gamification in areas as varied as marketing, human resources management, productivity enhancement, health and wellness, innovation, and customer engagement. These programs are not games; they are game-like or game-influenced activities. For example, a sales competition might rank competitors on a live “leaderboard,” or a corporate training program might award virtual “badges” for mastery of certain content. This course is about implementing such systems in ways that generate sustained engagement and produce measurable business benefits. No particular technical skills or game-playing experience are required.

Instructor

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Learning Objectives

After taking this course, you should:

1. Understand what gamification is, and how organizations are using it.
2. Be familiar with the fundamentals of game design and motivational psychology.
3. Be able to develop a gamified solution to a business problem using a design process.
4. Recognize the limitations and risks of gamification.

Course Structure

This is a “flipped” course. Content that would normally be delivered in class through lectures will be provided through short video segments (typically 5-10 minutes each), originally developed for the Coursera massive open online version of this course. Throughout the syllabus are short online quizzes that will test your understanding of the material in the videos.

One major benefit of this approach is that it frees up class time from basic content delivery. You can get the lectures in my MOOC, but only here can we do interactive exercises, simulations, case studies, discussions, and games which will greatly deepen your understanding of the topic. The

best way to learn gamification is to do gamification. Thus, many class sessions will involve group activities to apply and reflect on the concepts conveyed in the videos and readings. Both the individual study time outside of class and the active learning experiences inside it will contribute to your understanding of the subject matter, as well as your success in the course.

Because this course covers an emerging subject area in novel ways, it evolves every semester. I'm always working to improve the learning experience and incorporate feedback from prior students. If your friends have taken the course in the past, the class sessions and grading structure may be different this time around. Please review the current syllabus carefully.

Readings (*additional materials are hyperlinked in the syllabus*)

- Kevin Werbach and Daniel Hunter, *FOR THE WIN: HOW GAME THINKING CAN REVOLUTIONIZE YOUR BUSINESS* (Wharton Digital Press, 2012) – *available in paperback or e-book form.*
- Coursepack available via Study.net

Policy on Devices in Class

Use of laptops, tablets, and smartphones is prohibited during class sessions, when not explicitly included in a learning activity.

I've taken this step for two reasons. First, a [growing body of research](#) shows that digital multi-tasking creates unavoidable distractions and interferes with learning. Even for note-taking, [studies](#) find that paper is more effective than a computer. Second, complaints about nearby students checking social media were among the most frequent comments on my recent course evaluations.

My job is to facilitate in-class experiences that go beyond what you could learn by reading a textbook or watching a lecture online. That will include use of devices for groupwork, real-time polls, and other activities, but when not expressly authorized, please keep them off. (Students with relevant approved accommodations should contact me to discuss exceptions.)

Teaching Philosophy

I view teaching as a central aspect of my job as a professor. It's my responsibility to do my best to facilitate a valuable learning experience. Conversely, I expect you to take the class seriously, and to contribute actively. I welcome your feedback and questions about anything in the course. Don't hesitate to post a question on Piazza, contact me via email, drop by office hours, or schedule another time to meet.

I believe in using a variety of teaching methods, including significant amounts of active and collaborative learning. A large body of research shows that passively listening to lectures isn't the best way to promote long-term retention and learning. And why waste our three hours together in a room each week? After all, these days you can find virtually all the content from all of your classes online, without paying Penn tuition.

Finally, learning should be fun, even when it's challenging.

Schedule

- Wed 1/13 **Ready Player One**
Course goals and expectations. Introduction to the concept of gamification.
- Wed 1/20 **Gamification Basics**
What exactly is gamification, and how is it different from games? Overview and history of the gamification field. The value of studying gamification as a business practice.
- Watch: Videos 1.3, 1.4, 1.5, 2.1
- Read: For the Win, Ch. 1 (Getting Into the Game)
- Mon 1/25 **Games as Motivators**
What are the factors that make successful games so fun and engaging? How might the motivational techniques of video game designers be applied to the workplace, or other business contexts?
- Read: Total Engagement, Ch. 2 (The Game Tsunami)
- Watch: Jane McGonigal, [Gaming Can Make a Better World](#)
- Wed 1/27 **The Business Value of Gamification**
Why are firms turning to gamification to motivate their customers, employees, and communities? What does a typical gamification program look like?
- Watch: Videos 1.6, 3.1
- Read: The Gameful World, ch. 18 (Gamification and the Enterprise)
- Prepare: Club Psych Case
- Mon 2/1 **Foundations of Game Design**
Defining games. Distinguishing games from play, and from gamification.
- Watch: Videos 2.2, 2.3, 2.4, 2.5
- Assignment: Working together with your guild, create a video or screencast up to 5 minutes long, which explains the concept of gamification. Imagine you are describing to a friend or relative what this course is about, and why it's an important topic. To the extent possible, anticipate and address possible misunderstandings. Humor and creativity are encouraged!

- Wed 2/3 **Game Thinking**
The Easiest Game Design Exercise Ever (Really).
- Read: For the Win, ch. 2 (Game Thinking)
- Mon 2/8 **Deconstructing Games**
Now that we've seen what it's like to build a game, we'll work backward to see how features of finished games emerge from their rules and other design structures.
- Read: Game Design Workshop, Ch. 2 (The Structure of Games)
- Wed 2/10 **Game Elements**
A game element is a common design pattern used in games, such as levels or points. One of the key techniques of gamification is transposing these game elements into other contexts, such as marketing or training programs.
- Watch: Videos 4.1, 4.2, 4.3, 4.4
- Reading: For the Win, Ch. 4 (Game Elements)
Gamification Toolkit E-Book (Wharton Digital Press, 2015) (optional)
- Mon 2/15 **Sports Card Game Exercise**
The best way to practice thinking like a game designer is to design games. To illustrate how games can incorporate activities from the real world, you will create playable card games that mimic a sport.
- Read: Game Design Workshop, Ch. 1 (The Role of the Game Designer)
Penny Arcade Report, The Design of Paint the Line
- Watch: Videos 3.2, 3.3
Penny Arcade's Paint the Line ECG: Red Tide videos
- Wed 2/17 **Applied Hedonics: What Makes Games Fun?**
"Fun" seems like a simple concept, but under closer examination, there are several categories of experiences that people find pleasurable. We will consider what research on video game players suggests about creating engaging experiences.
- Watch: Videos 3.4, 3.5, 3.6
- Read: Game Design Workshop, Ch. 11 (Fun and Accessibility), pp. 312-29
- Guild Task: Working with your guild, refine your sports card game until it is far enough along to playtest. You should bring in a diagram of the game board (as appropriate), as well as a list of rules, with sufficient information for another guild to understand and play your game.

Mon 2/22 Sports Card Game Gallery

You will have the opportunity to play and evaluate other guilds' game designs. How effective were they at creating an enjoyable game, and how well did they represent the real-world sport through the gameplay?

Guild Task: Finalize your sports card game. Bring in the final materials and rules.

Wed 2/24 Operant Conditioning

Gamification is a practice of applied motivational psychology. Behaviorism, and in particular the concept of learning through reinforcement, are useful to understand the effectiveness of gamification, as well as its limitations.

Watch: Videos 5.1, 5.2, 5.3, 5.4, 5.5

Read: The Gameful World, Ch. 3 (Gamification as Behavioral Psychology)

Mon 2/29 Self-Determination Theory

What is the difference between intrinsic and extrinsic motivation, and how can gamification address both of them? When can reward-based gamification actually be counter-productive?

Watch: Videos 6.2, 6.3, 6.4, 6.5

Read: The Gameful World, Ch. 4 (Gamification and Motivation)

Wed 3/2 Guild PvP

An in-class guild competition, based on what we have covered so far. Be sure to bring your notes to class, as use of electronic devices to look up answers will be prohibited.

Assignment: Initial ideas for final project.

SPRING BREAK**Mon 3/14 Design Thinking**

Gamification as a design practice. Design thinking exercise.

Watch: Video 7.1, 7.2, 7.4, 7.5

- Wed 3/16 **Gamification Design Process**
What is design thinking, and how do design processes help create good outcomes? What are the steps to a successful gamification design project?
- Read: For the Win, Ch. 5 (Game Changer: 6 Steps to Gamification)
- Mon 3/21 **Player Types**
How can systems be developed to meet the varied personalities of their players?
- Watch: Videos 7.3
- Read: Quantic Foundry Blog Posts: Gaming Motivations Group into 3 High-Level Clusters and Gaming Motivations Align with Personality Traits
- Assignment: Complete the Bartle Test (<http://www.4you2learn.com/bartle/>). Use Group Name "LGST240" and Group PIN 8092, so that the results from this class are stored together.
- Guild Task: Final project overview.
- Wed 3/23 **Does Gamification Work?**
We'll examine a prominent example of gamification and debate what it teaches us about the effectiveness of the practice.
- Prepare: Foursquare case
- Read: Hamari et al, Does Gamification Work?
- Mon 3/28 **Design Choices**
What distinguishes a successful or sophisticated example from an ineffective or superficial one? The effectiveness of gamification often comes down to choices during the design process.
- Watch: Videos 8.2, 8.3, 8.4
- Read: Nicholson, A User-Centered Framework for Meaningful Gamification
- Wed 3/30 **Gamification and Learning**
Gamification is being used widely in schools, universities, and corporate training contexts to motivate learners.
- Read: Lee and Hammer, Gamification in Education

- Mon 4/4 **Gamification for Behavior Change**
Using gamification as a form of persuasive design, or to promote socially desirable outcomes.
- Watch: Videos 10.1, 10.2, 10.3, 10.4
- Read: Fogg, A Behavior Model for Persuasive Design
 HIP Program Final Report summary
- Wed 4/6 **Epic Fails**
In this class, we'll peer into the dark side of gamification. Where can things go wrong? How to designing around common mistakes and limitations? And what legal and regulatory considerations come into play when building gamified systems?
- Watch: Videos 11.1, 11.2, 11.3, 11.4, 11.5
- Read: For the Win, ch. 6 (Epic Fails)
- Mon 4/11 **Final Project Development**
Initial feedback sessions on your final gamification projects.
- Guild Task: Final project update.
- Wed 4/13 **Project Iteration and Feedback**
Feedback sessions on revised projects.
- Mon 4/18 **Pitch Day 1**
Half the guilds will present their final projects.
- Weds 4/20 **Pitch Day 2**
Half the guilds will present their final projects.
- Mon 4/25 **In-Class Exam**
The exam will include multiple-choice and short answer questions on the major concepts covered in the course.
- Wed 4/27 **Post-Mortem**
A "post-mortem" review session is a standard element of the game design process. After considering what we've learned during the course of the semester and what the future of gamification looks like, will discuss what worked well in the course, and what could be improved.

Grading

Your grade will be comprised of the following:

Individual Assignments (30%)

You must select two assignments during the course of the semester from a menu of choices. Each is worth 15% of your grade.

Guild Projects (30%)

Working as a group, you will produce a gamification definition video, sports card game, and “boss fight” final project, which involves a detailed proposal to gamify a real-world activity. Details will be provided during the course.

Quizzes (10%)

There are short (3 questions) multiple-choice quizzes that cover material in the assigned videos. These are designed primarily to ensure that you view and understand the videos prior to class. Take them online via Canvas at any time before the deadline.

Exam (20%)

The in-class closed-book exam during the final week of class will cover the major concepts covered in the course.

Participation (10%)

Students will be assessed on their overall contribution to the course. This includes attendance, comments during class, posts to the course discussion boards, and contributions to group projects. At the end of the semester, you will be asked to complete a private peer evaluation of your fellow guild members, which will be incorporated into the class participation score.

In addition, there will be a Guild PvP competition, in which guilds can earn extra credit points.

Attendance Policy

While not sufficient in itself, attendance is a key part of the class experience. We all face trade-offs in life. Although I appreciate your desire to be polite, you don’t need to tell me in advance if you will miss class, or contact me afterwards about the reasons for an un-excused absence (i.e., not involving a medical issue, obligatory university/athletic trip, or family/personal emergency.)

I recognize that students sometimes miss class for understandable reasons such as recruiting. There is no way to “make up” a class. However, if you contribute actively during the semester, missing a handful of sessions is unlikely to have a substantial negative effect on your participation grade.

If you believe your absence should be excused, please email me an explanation and, where possible, documentation. You need not use the Penn Course Absence Reporting system.

Assignments

As you will see, one of the important principles of game design is choice and experimentation. People tend to be more engaged, and perform better, when they feel in control and this risks of a mistaken choice are relatively low. I have adopted this insight for the course.

There are a number of assignments throughout the course. You must submit **two** of them, but you can choose which ones. Pick topics that interest you, and that you feel like you can do a good job addressing. If you submit more assignments, you will receive credit for the highest two scores. (In other words, if you are not satisfied with your score, you may have the option of improving it by doing another assignment.)

For the assignments submitted in writing, there is no formal length or format requirement, but a good submission will typically be 3-5 pages, single-spaced. The longest papers will not necessarily receive the best grades. Being organized and concise is important, as is sophisticated analysis that does more than merely repeat materials from the readings or videos.

Because the assignments correspond to different parts of the course, each one has a deadline during the semester, which is specified in Canvas. Typically, the assignments will also include an “available until” date a few days later. Late submissions past the due date receive a deduction, and are not accepted beyond that deadline.

Casual Games

Spend some time playing a casual online/mobile game, such as Candy Crush Saga, Clash of Clans, or Words With Friends. (These are just examples; it can be any game of your choosing.) Answer the following questions, drawing on the concept discussed in the course: Is the game fun? Why or why not? What could a business learn from this game?

Sports Card Game Review

Describe what you learned from the sports card game exercise about game design and/or gamification. Then, explain how you could apply those lessons in a business context, to solve a concrete problem. *Prerequisite:* Guild submission of a sports card game.

Course Gamification

Describe how you would gamify one of your Penn courses (other than this one). Be as specific as possible about how the gamification system would operate (illustrations or diagrams would be helpful), and what it would be designed to achieve. Explain why you believe it would be effective.

Player Types

After completing the Bartle “player type” test, discuss whether your results are an accurate reflection of your personality. Give examples that are consistent or inconsistent with the results. Explain whether the Bartle types or the Quantic Foundry Gamer Motivation Model is a better framework to use for designing gamified systems (as opposed to games themselves).

Psychological Techniques

Spend some time playing a casual online/mobile game, such as Candy Crush Saga, Clash of Clans, or Words With Friends. (These are just examples; it can be any game of your choosing, so long as you didn't already use it for a prior assignment.) Analyze the techniques the game uses to

motivate players to participate, and to keep playing. Are they effective? Why or why not? Draw on the psychological concepts discussed in the course.

Self-Improvement Gamification

Spend some time using the following free gamified services: Habitica (<http://www.habitica.com/>), Mindbloom (<http://www.mindbloom.com/>), and SuperBetter (<http://www.superbetter.com/>). Do a comparative analysis that explains which system you think is most successful, and why. Give specific examples of design aspects that you find effective or ineffective, and tie them back to concepts we discussed in the course.

Learning Gamification

Spend some time using the free online language learning service Duolingo (<http://www.duolingo.com>) and the free online educational site Khan Academy (<http://www.khanacademy.org>). Do a comparative analysis that explains which you think has the more successful implementation of gamification, and why. Give specific examples of design aspects that you find effective or ineffective, and tie them back to concepts from the course.

Bogost Response

Read Ian Bogost's article in the coursepack, "Why Gamification is Bullshit." Write a response that either agrees with and expands on his criticisms, or disagrees and rebuts them. Support your arguments with evidence from the course. Finally, identify some concrete actions that a prospective gamification designer could take to address the concerns Bogost raises.