Bronze Digital Badge: *Using Gaming in the Classroom*

**Overview**
This document outlines and describes my plan to integrate game-based elements into a course I teach, EDUC-P250 *General Educational Psychology*. The course is required of all education majors. Typically, the course has been taught in a lecture-based format. My goal through this innovation is to create a more actively engaging and motivating classroom environment that promotes for students the development of a working, enduring understanding of theories of learning.

**Dates and details of consultations and learning:**
- **August – November, 2013:** Independent reading of the following books centered on understanding game design, application to the classroom, and the potential cognitive benefits of games in learning:
- **September – November, 2013:** Mentored and collaborated with an education graduate student in the design of a QR Code-based scavenger hunt review game for EDUC-P250.
- **September – December, 2013:** I participated in informal brainstorming sessions with fellow members of the Faculty Gaming learning community at IUSB about specific ideas for the use of games in my course.
- **Wednesday, December 4, 2013:** I met with Kale Kanczuzewski to discuss general ideas, approaches, and scope to integrating games and gaming elements into an existing course.
- **December 12, 2013:** With a group of education students, I conducted a critical analysis of *Apples to Apples* game mechanics (through play) and developed the approach described below.
- **December, 2013:** *Apples to Apples P250* game prototyping (in progress)
- **December, 2013:** Gamified syllabus preparation (in progress)
- **Anticipated continued learning for Spring 2014:** Enrollment in Coursera *Gamification* course to be offered over a 10-week period beginning January 27, 2014. The course is taught by Kevin Werbach of the University of Pennsylvania and is framed in terms of business and social issues. I am interested in the broader social context of games and informal learning and, as such, anticipate that participating in this course will offer a valuable perspective on gamification and useful insights for my continued course evolution. See full course description here: https://www.coursera.org/course/gamification
Written plans or material:
This is a summary of how I plan to integrate elements of gaming into one of my courses. I am presently working on these innovations and will implement them in Spring, 2014.

1. Gamification of course syllabus. Example modifications:
   • Shift in grading scale to focus on earning points and “leveling up”
   • Integration of a badge feedback system
   • Students will work in collaborative “Guilds” over the course of the semester
   • Flexible assignment format to afford multiple paths to mastery

2. Discrete games to be integrated into course curriculum:
The following games are in various stages of development/piloting to be implemented in two Spring, 2014 iterations of the course EDUC-P250 General Educational Psychology.

   • QR Code Scavenger Hunt
     Synopsis: The purpose of this game is to serve as a formative review opportunity beyond a traditional paper and pencil quiz. To design this game, I created 20 distinct QR codes. When scanned with a mobile device, each code links students to a multiple-choice question and possible responses created using Google forms (drive.google.com). Upon submitting a response, a prompt directs students to another door number in the Education and Arts building, where they receive feedback on whether their response is correct. If they respond correctly, the door they are directed to will have a new QR code for them to scan, which would link to a new question to answer, and so on. If, however, the response is incorrect, there will not be a new code and students would have to re-attempt the previous question until they answered correctly and arrive at the door with the next code. Data from the game will be logged in a Google spreadsheet and provide valuable data on student performance.

   • Apples to Apples-inspired Game
     Synopsis: This game is currently in development (as is a clever name). The game will be comprised of red “concept” cards and green “scenario” cards. Each player will be dealt five red cards. Similar to Apples to Apples, the game will be played in rounds, where in each round one player assumes the role of the judge. In each round, the judge will draw a green card that will be printed with a brief scenario. Once that card is revealed, each player will select the concept card that they feel has the most descriptive or explanatory power over the green scenario card. Each player will be allowed to justify their choice of concept, and the judge will determine who has selected the most appropriate concept and provides the most convincing argument. The player whose card was chosen keeps the green scenario card for winning the round, and the first player to collect three green cards wins.
Reflection:

Why does the idea interest me?

I have elected to focus on course innovations that involve gaming elements for a number of reasons. One of the main reasons is the breadth of psychological research that has been done that points to the potential cognitive benefits of game play. Games are motivating. Moreover, games offload mistake to the process of play in a way that minimizes the association with failure (which, if not minimized, can impede student performance toward mastery). Gaming promotes collaborative learning and problem solving, which is a consideration I have been hoping to address more precisely in my classes. This topic also interests me because when individuals play games they tend to become immersed in the experience and, as a result of this engagement, are more likely to remember information and develop enduring understanding of course concepts.

As a teacher of future teachers, I feel it is important to model innovative classroom practices. This element of my philosophy of teaching has motivated my decision to deepen my understanding of using games in the classroom as a way to demonstrate for my students the importance of embracing instructional innovation. In short, in a foundational course where students have limited prior knowledge of psychological theories, I am exploring options to create a more engaging experience for learners in a way that affords effectively meeting all of the course’s objectives. Integrating games and game elements have the potential to help me meet that end.

What impact do I expect?

Based on theoretical support for the benefits of games on student motivation, I anticipate that students will be motivated in positive ways toward mastery of the breadth of sophisticated psychological concepts covered in this course. I often refer to the course as a “sampler platter” of psychological concepts to students and, in step with this metaphor, anticipate that a game will allow larger servings of concepts on the plate. Students often indicate through course feedback that they have difficulty fully understanding the concepts they read about in the textbook. Through the above-proposed course modifications, I expect that students will better comprehend course readings as a result of increased opportunities to actively think with course concepts through collaborative game play.

Alongside the development of domain-specific understanding, I anticipate that students will develop collaborative and general problem solving skills through participation in discrete games and through working in guilds throughout the semester. Moreover, through the Apples to Apples-inspired game I anticipate that students will develop argumentation skills and learn how psychological theories can be used as evidence to support the instructional choices they make in their future classrooms. I plan to provide students opportunities to provide formative feedback on their perceptions of the course and will use these to calibrate-in-action throughout the semester.

Overall, I am optimistic about the positive impact of these innovations on student learning.