PLAYING WITH FIRE: GAMIFYING LIBRARY INSTRUCTION IN A FIRST-YEAR EXPERIENCE PROGRAM

KATHRINE C. AYDELOTT AND KELLIAN ADAMS

WOULD YOU LIKE TO PLAY A GAME?

Despite the goals of the new ACRL Information Literacy Framework for Higher Education, for many librarians, library instruction is still delivered in “one-shot” sessions that are either tools- or skills-based. Gaming pedagogies have the potential to revolutionize library instruction by delivering instruction directly to students.

FIRE: THE SPARK

Last year, the Peter T. Paul College of Business and Economics at the University of New Hampshire (UNH) revitalized its First Year Experience program for the 700 admitted students expected for academic year 2015-16. The heart of the FIRE program was the grand-challenge pedagogy designed to model business networking and to promote social connectivity and team building.

Teams research and earn points to bid on one of five high-level problem statements: Colonizing Mars, Living Virtually, Powering the Northeast, Surviving Severe Weather, and Prolonging Life. In each of four phases, students have the opportunity to develop project management, research, communication, and presentation skills by taking on different roles. Each team then proposes a solution to an aspect of their grand challenge topic. Presentations are judged by a panel of faculty, peers, and alumni, and at the end of the year, a $500 academic achievement prize is awarded to each member of the winning team.

FIRE is gamified in that a game framework combines life-skill lessons, mini-games, and the academic challenge. Individual and team points are awarded for various activities and achievements, and prizes are earned for quality participation and achievement. Point totals are then collected and tracked using Excel spreadsheets and are incorporated into a running leaderboard. This framework is designed to keep students engaged over the course of the year.

Figure 1: FIRE Leaderboard and Points Offer

FIRE AND THE LIBRARY

Kathrine Aydelott, the Instruction Librarian at UNH’s Dimond Library, heard about the FIRE program and wanted to participate: she recognized the potential to partner with a new program still in the design phase and wanted the library to be part of the “Research” component of FIRE. Soon she was attending FIRE’s weekly development meetings. The library
would not be an add-on component, as so often happens, but instead an integral part of the team.

After all, students needed to navigate the library resources to succeed in their grand challenge research. Most would receive a one-shot orientation to research tools in their English classes, but many FIRE students would receive this instruction only in the spring. Kathrine wanted instruction during the fall term that wouldn’t repeat what the students would hear later. A mini-game would be ideal. But she had no game design experience.

Serendipitously, Kellian Adams—Mastermind of Green Door Labs, an educational game design company in Somerville, Massachusetts, and a UNH alumna looking to partner with her alma mater to explore gaming and libraries—contacted Kathrine.

GREEN DOOR LABS AND THE EDVENTURE BUILDER

Green Door Labs had been building games to connect digital technology and physical locations since 2012. Specializing in games for libraries and museums, such as “Murder at the Met” with the Metropolitan Museum of Art, Kellian works with instructional technologists, public program educators, and education technology professionals looking for flexible, simple, creative ways to make their organization's content more interactive.

For FIRE, Kellian suggested Green Door Labs’ flexible Edventure Builder software, an easy-to-use platform that lets non-developers design, create and edit their own mobile scavenger hunts, choose-your-own-adventures or interactive stories. The text-based interface, similar to Wordpress or a Word document, is extremely flexible, allows limitless edits, and requires no programming. Builders can create games online and then activate them for playing on any web-enabled device.

Using the Edventure Builder is easy: add text and choose how you’d like players to respond (take photos, write opinions, find specific answers or choose multiple-choice options). Include images, videos, and links, and route the game’s pathway to make it linear, random, or multiple-choice. A flow chart lets you easily see how the game play lines up, and the reporting function lets you see instantly who has played your game, how long they played, and how they responded to your challenges. Responses can be easily exported into Excel files to share with teachers or administrators. Hundreds of learning games have been built using the Edventure Builder at such organizations as the University of Arizona, McGill University, The Federal Reserve Bank, and the US Army.

Figure 2: Edventure Builder Screenshot

“UNLOCK THE DOOR”

With Kellian on board, Kathrine also found an on-campus partner in Joshua Niman, a UNH sophomore and history major. Joshua had inspired his father, Neil Niman, Associate Dean of Student Affairs at Paul College, to see the value of games as a way to incentivize student work, and Neil authored The Gamification of Higher Education (2014), which later led to the development of the FIRE program. Joshua both played the kinds of games Kathrine wanted to design and worked easily with the Edventure Builder.

Kathrine and Joshua initially agreed to one thing: no scavenger hunts! These well-intentioned escapades implied that research was more about a dash through the library building than learning about tools, skills, strategies, and dispositions. They worried that placing clues in the stacks could lead to sabotage by entrepreneurial opportunists on competing teams. Could they design a game that would be hack-proof but still deliver a worthwhile learning experience?

The game needed to be low-impact to avoid any potential negative impact on the already busy library staff. Kathrine wanted to design a game based on the “Scholarship is a Conversation” frame of the Information Literacy Framework for Higher Education (2016)—she and Joshua thought about Kenneth Burke’s proverbial “dinner party” metaphor for research (1967) but weren’t sure that would register with first-year students.
They agreed to an “escape the room”-style game: by exploring a virtual room, a player would find clues that taken together would lead to escape. This concept would work with “Scholarship is a Conversation” if a player, upon finding a list of references, must locate them using the library’s resources, particularly if one of the citations is referenced in another to demonstrate the referential nature of scholarship. The text-based game wouldn’t involve the physical library at all, but written in an immersive way, finding articles by using citations in library resources would be identical to how students research from their dorm rooms. Finally, with deadlines looming, they agreed to aim for a game that was engaging. If it turned out to be fun, that was great, but learning how to do research—whether one is locked in a room or not—is abstract, nerdy, and not intrinsically fun. Their goals were to design a game that worked all the way through, and that fit within FIRE’s larger points framework.

Using the Edventure Builder, Joshua built the skeleton of the entire game one logic-step at a time, and Kellian kept him and Kathrine on track with weekly support calls. Since it was all in his head, Kathrine couldn’t help Joshua at this stage and could only applaud his diligence as each choice had to be written and looped into place. The Edventure Builder was great because designers can change the structural view from linear steps to flowcharts to see how each logic-choice is connected and routed.

The gameplay involved the awarding of points for successfully moving through the game. This was significant, as Kathrine and Joshua didn’t want the lock combination getting out and students simply entering the code and “solving” the game for FIRE points. Thus, no points were awarded for simply unlocking the door, only for finding the references and identifying the code letters identified by the code sheet; points were also deducted for entering incorrect letters. Students who finished the game with a positive point total would be awarded additional FIRE points. Because the FIRE development team couldn’t feasibly track unlimited attempts, the game was designed to play once, so players who “solved” the game without playing through were locked out from trying again.

A further design challenge was how much information to provide to the students at the beginning. Joshua, the gamer, wanted to keep the game immersive and provide as little information as possible; Kathrine, the professor, wanted to give tips and guidance. The compromise was using the FIRE Research Guide to provide a link to the game and outline the work involved: Joshua estimated it would take an average player about 30-45 minutes to play the game, and Kathrine recommended taking notes to track progress.

With the skeleton complete, they finessed the details, adding storyline text and pictures to make the game as immersive as possible, and then tested it to ensure that all possible choice combinations worked and the logic didn’t break. The “library game” became “Unlock the Door.” Kathrine and Joshua released the game for outside testers the week ahead of the launch date. When one early tester, a FIRE peer advisor, crowed about her success in finding the code and unlocking the door, they worried that the solution would spread amongst the students like…well…wildfire. But they were also pleased that testing revealed that the game as a whole worked.

**IF WE BUILD IT, WILL THEY PLAY?**

Homecoming, the last weekend in September, was an early milestone for FIRE students as team points totals were used that weekend to bid on their grand challenge projects. There was a mad scramble during the week as individuals and teams took every opportunity to raise their point totals. After the bidding on Saturday, FIRE students entered a quieter period that the program team felt would be appropriate for introducing the research component using “Unlock the Door.” The game launched on a Sunday and was open for one week.

Unfortunately, student reaction was anemic and player numbers reached only around 120 students. No one completed the game with a positive point total, several students didn’t enter their ID correctly and couldn’t be identified, and several players entered the “secret” code word after only a few steps indicating that they took short cuts. The FIRE team decided to relaunch the game the next week with the incentive to solve the puzzle individually but to work in teams. The game reopened to similarly lackluster numbers. As game designers, we were pleased that our overall goals for the game were met, but we were disappointed with participation rates, and amazed by the opportunists.

**WHO WON?**

People who don’t build games regularly are surprised that one of the greatest challenges is getting people to play their games. Kellian wrote about this in a blog article called “Please oh please play my game” (2014). This is a problem that every gamebuilder faces, and yet there’s a common misconception that if you build a game, everyone will want to play. The power of delivering your content through games is the positive environment and the amount of focused engagement with your content it creates, but getting people through that initial door (so to speak) can be a challenge.

In Kellian’s experience, the best-attended games are ones that are connected to an existing event: a required campus orientation, a mandatory library session, a field trip to a museum, or a special “late night” event. Many FYE games have this advantage built-in: games at the University of Arizona and the University of California San Diego libraries have had thousands of students play since they’re part of existing FYE programs. Since the FIRE game was voluntary and not connected to an event, it had the added challenge of getting—and keeping—the attention of college freshmen on a quiet homework week. This was a tall ask for an optional reward.

Under these circumstances, the fact that 120 students played is a testament to the success of “Unlock the Door” and the students’ drive to earn FIRE points. However, since points were the main motivation, the result was a lot of cheating. Once
people figured out they could get an advantage by sharing a code word, they went for it!

We learned several important lessons in building and running this game. First, we very much appreciated how the Edventure Builder allowed us to run an information-literacy-based research game without having to impact the space of the physical library. The platform has tremendous potential to run library games in either the physical or the virtual environment, and in that regard is flexible enough for libraries and populations large and small.

The next lesson involved timing. If “Unlock the Door” had been scheduled during the frenzy for points before Homecoming we might have had more overall players.

Another lesson involved recognizing the students’ return on investment. “Unlock the Door” was decidedly unlike many of the other mini-games FIRE students were playing, which involved taking a short quiz or survey for the same number of points awarded for completing “Unlock the Door” with a positive point total. Students were used to “quick and dirty,” and we were asking for slow and methodical. Certainly, this is how research works, but the students’ expectations had already been set. Our ends didn’t match their means.

This led to our final lesson, which was one of advertising. We might have called our game an “adventure,” or even an “assignment.” A name change might have set more realistic expectations for time and attention and might have led to more attentive gameplay. The FIRE team also recognized that we could have built up the hype for the game. The relaunch, which allowed students to play collaboratively and still enter and earn points individually, brought in a few more players, but once the lock code got out, there was less incentive to play.

In future iterations, we would tie the library game to other parts of the FIRE program. Upgrades in the Edventure Builder platform will let us “lock” answers so it will be easier for us to score and harder for students to cheat. The “open answer” function was also extended so students can leave a note up to 4,000 characters with their response to questions we pose.

The game would benefit from being run for a longer period and possibly at a less hectic time of year for the students. And we can make it slightly easier—or even modular, where students can earn points for partial completion rather than only for the final correct answer. We believe there are lots of ways that we could make the students respond to this game.

As Kellian said as part of her analysis: “Having someone cheat your game is way better than having them ignore it.” So for Kellian, our “first failure is our first success.”

REFERENCES


