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Trial By Fire: Gaming and Badging in an FYE Program

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Trial By Fire:

Gaming and Badging in an FYE Program

Wendy Girven Pothier, Kathrine C. Aydelott, and Benjamin Peck

Introduction

At the University of New Hampshire's flagship Durham campus (UNH), librarian-facilitated information literacy has traditionally consisted of single-class, lecture-based, bibliographic instruction delivered to first-year English composition students. With the arrival of the authors at the UNH Library, new campus partnerships were forged that led to the development of information literacy-based library games as an alternative to these one-shot sessions.

This chapter presents a case study of how we designed and implemented several iterations of information literacy games and digital badges at UNH. Our collaboration with UNH Peter T. Paul College of Business and Economics' First-Year Innovation and Research Experience program (FIRE) was a key part of our story. In part one, we outline the context and structure of the FIRE program and detail the elements of our first game, Unlock the Door. Part one also analyzes the challenges that ultimately led to the transition away from that game. In part two, we detail our experience developing and deploying a second game, The Case of the Missing Wildcat. This section highlights embedding the game into the campus learning management system, Canvas, and the addition of badges as another component of the game. In part three, we look at the differences between the two games to consider why the Wildcat game garnered more players than Unlock the Door, and we preview future plans for gamified information literacy and badging at UNH. Finally, part four outlines our recommendations for other information literacy-based game creators.

Part One: The FIRE Program and Unlock the Door

FIRE Program Overview

Gaming and gamified information literacy at UNH Library first took shape through a collaboration with the Peter. T. Paul College of Business and Economics. In 2015, Paul College revitalized its First-Year Experience (FYE) program and renamed it FIRE: First-Year Innovation and Research Experience. The heart of the FIRE program is a gamified Grand Challenge pedagogy, which takes large-scale, difficult-to-solve problems and seeks to find solutions that benefit society. FIRE models business networking and promotes social connectivity and team building. By completing FIRE, students are intended to have a better understanding of

- the resources and opportunities available to UNH students for career and academic assistance;
- the skills needed to succeed as a UNH and Paul College student, as well as in business and professional spaces;
- potential major focuses, student organizations, and internship opportunities and corresponding career paths; and
- the importance of mentorship and the value of the broader UNH community network.

They also learn how to

- approach and solve complex problems using a variety of different techniques;
- effectively present a business concept and its corresponding research; and
- be a part of and develop a team culture.[1]

FIRE is a competitive, gamified framework that combines life-skill lessons, mini-games, and an academic challenge. Paul's first-year class of approximately 650 students is divided into teams of twenty to twenty-five that undertake a year-long competition using peer mentors from the junior and senior classes and business-affiliated UNH alumni serving as their guides. Students receive points individually and in teams for participating in a variety of college and university opportunities, such as attending sports events, participating in clubs, or going to social and networking events. Students earn prizes for quality participation and achievement. Points are collected and tracked for each event, and student and team leaderboards are displayed publicly in Canvas. This framework encourages student engagement over the course of the year.

FIRE's gamified framework is built around developing innovative solutions to Grand Challenges, defined as difficult but important global problems. These may be specific, such as "Threats from Cyberspace," or general, such as "Food?" Students in the FIRE program were introduced to the Grand Challenge topics early in the fall semester to give them an opportunity to consider the broad array of ideas that can be associated with each topic (anaerobic farming and GMOs, for example). This introductory information is important later on when FIRE teams use points earned in the gamified program to bid on one of the five Grand Challenge topics that they will pursue and expand on during the rest of the academic year, culminating in a significant final project, presentation, and competition.

The Grand Challenge topics, therefore, provide the basis for early student bonding and collaboration as well as for early individual and team research initiatives. They serve as research themes for the year, provoking and inspiring innovation and creative thinking. The Grand Challenges also provide FIRE with an interdisciplinary component because, as Sean Stewart, FIRE program coordinator says, "Successful Paul College graduates need to be well-rounded, with a broader perspective, looking beyond their courses in business and economics to understand problems and positively affect change."[2]

Unlock the Door: Developing our First Game

Librarians were involved with the FIRE program from its earliest development stages. Already interested in gamifying information literacy instruction and recognizing the potential to partner with a new program still in the design phase, Kathrine, as information literacy librarian, asked to partner with the team. Librarian support would not be an add-on, one-shot component to the program, as so often happens, but an integral part of its development. Librarian involvement meant helping Paul College identify a standard citation style (APA), developing in-depth research guides to support student research on the Grand Challenge topics, and perhaps most significantly, creating and launching the library's first information literacy game.

Our initial consideration was to create a FIRE-specific information literacy component that would not repeat what the students would hear from librarians later in other foundation-level classes. We wanted a game that taught students how to find various formats of information in the library's databases and that would fit within FIRE's larger game framework.

The library and FIRE collaborated with Kellian Adams and Green Door Labs, an educational game design company in Somerville, Massachusetts, which specializes in games for libraries and museums, such as Murder at the Met with the Metropolitan Museum of Art. Green Door Labs' Edventure Builder (see figure 9.1) is a web-based 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 requires no programming experience.[3]

We 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 academic programs at Paul College, to see the value of games as a way to incentivize student work. Neil had authored *The Gamification of Higher Education*, which later led to the development of the FIRE program.[4] Joshua both played the kinds of games we wanted to create and understood the logical paths necessary for game design.

We began our design process by eliminating game elements that we wanted to avoid. First, we wanted to avoid a scavenger hunt-style game. These well-intentioned escapades often imply that research is more about a dash through the library building than about learning tools, skills, strategies, and dispositions. Further, the game needed to be low-impact to avoid any increased workload for the already busy reference desk staff. Finally, we wanted to design a game based on the Scholarship as Conversation frame of the *Framework for Information Literacy for Higher Education*, which would embed an overarching architecture and keep information literacy a primary focus.[5]

Figure 9.1
Edventure Builder screenshot

We eventually decided to create a virtual escape room-style game in which each player finds a list of references in the room and has to locate the sources on the reference list by using library resources in order to escape the room. One of the citations was referenced in another to demonstrate the conversational nature of scholarship. The text-based game would not involve the physical library at all, only the UNH library website, and the process of students finding sources online would mirror their research outside of the library.

Students would not receive points for unlocking the door and finishing the game but instead would receive points at each step of the game when they find each reference and enter a corresponding code correctly. We sought to discourage sheer guesswork by deducting points for incorrect codes. Students who finished the game with a positive point total gained additional FIRE points. Because the FIRE development team could not feasibly track unlimited attempts, players who "solved" the game without playing through found themselves locked out from trying again.

In considering how to introduce players to Unlock the Door, another choice we debated was how much information related to finding the references we would provide to the players at the start of the game. Should we provide as little information as possible in order to keep the game immersive and competitive, or should we give tips and guidance to ensure students could make it through? The compromise was to use the FIRE research

LibGuide (see figure 9.2) to provide a link to the game and outline the work involved.[6] We estimated it would take an average player about thirty to forty-five minutes to play the game—about the same amount of time as a standard reading assignment—and we recommended that students take notes to track their progress.

Figure 9.2
Screenshot of FIRE 2018 Research Guide

Once we had built the structure of the game, we finessed the details, adding storyline text and contextual images to make the game as immersive as possible. We used student assistants to test the game to ensure that all of the possible choice combinations worked and that the logic would not break. The library game became Unlock the Door. We released the game for outside testers one week ahead of the scheduled launch date. When one early tester, a FIRE peer advisor, crowed about her success in finding the code and unlocking the door, we worried that the solution would spread among the FIRE students, but we were also pleased that testing revealed that the game as a whole worked and elicited enthusiasm.

Homecoming weekend was an early milestone for FIRE students as team points totals were used that weekend to bid on their Grand Challenge projects. FIRE staff predicted that the significance of this event would lead to increased motivation during the week prior as individuals and teams took every opportunity to gain more points and stronger bids. After the bidding on Saturday, the game launched on a Sunday and was open for a one-week period (see figure 9.3).

Figure 9.3
"Unlock the Door" screenshot

After the Game: Lessons Learned

People who do not build games regularly are sometimes surprised that one of the greatest challenges is getting people to play.[7] The power of games is the positive environment they create and the amount of focused engagement they foster, but getting people to take the initial leap to participate can be a challenge. We assumed that simply because we had made a game that students would want to play it, but our assumptions were not correct. As we will outline in this section along with our results, it takes more than an "if we build it, they will come" mindset to make a game successful.

Unfortunately, student reaction to Unlock the Door was anemic and player numbers reached only around 120 of the approximately 650 FIRE students (18 percent). Not a single student completed the game with a positive point total, several students did not enter their ID correctly and were unidentifiable, and several others entered the "secret" code word after only a few steps, indicating that they knew the solution and took short cuts. The development team decided to relaunch the game the following week with the incentive to solve the puzzle for individual points but with the ability to work in teams. The game reopened to similarly lackluster numbers. As game creators, we recognized our overall goals in game design and development, but we were disappointed with the low participation rate and the high incidence of cheating.

According to Green Door Labs, the most popular educational games on a campus are ones that connect to an existing activity: for example, a required orientation, a mandatory library session, a field trip to a museum, or a special "late night" event. Many first-year experience 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 because they are part of existing FYE programs.[8] As the FIRE game was voluntary and not connected to an assignment, it had the added challenge of getting—and keeping—the attention of college freshmen on a quiet homework week. This was a big expectation 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, as 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 took the opportunity—and shared it.

We learned several important lessons in building and running this game. First, we very much appreciated how the Edventure Builder allowed the team to run an information literacy-based research game in the virtual environment without having an impact on the space of the physical library. In that regard, the platform is flexible enough for libraries and student populations large and small. In addition, it allows students to expand their perception of libraries beyond the physical building as well as aiding in the conservation of library staff time by focusing on the online learning environment.

The next lesson involved timing. Unfortunately, the period following homecoming weekend was so quiet that most students seemed to be uninterested in earning more points, which contributed to a much lower participation rate than we had hoped. If Unlock the Door had occurred during the frenzy for points before homecoming weekend, the game might have had more overall players.

Another lesson involved recognizing the students' return on investment. What we didn't know during the design phase was that Unlock the Door was unlike many of the other mini-games FIRE students would play, which mainly involved taking a short quiz or survey for the same number of points awarded for completing Unlock the Door. Students playing these other games were used to "quick and dirty," but Unlock the Door was asking for slow and methodical. Certainly, the latter is how research actually works, but the students' expectations had already been set.

This led to the final lesson, which was one of marketing. We might have called our game an "adventure," or even an "assignment." A name change might have set expectations that are more realistic for students in regard to the time and attention required and might have led to more attentive gameplay. The FIRE development team also recognized that they 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 again, once the solution code got out, there was less incentive to play.

If we had continued with Unlock the Door, the game would have needed better integration into other parts of the FIRE program. Upgrades in the Edventure Builder platform would have allowed designers to "lock" answers, so the game would have been easier to score and would have made it harder for students to cheat. Unlock the Door also could have benefited from a longer period for student completion. Additionally, we could have made it easier for students could earn points for partial completion rather than only for the final correct answer.

However, as Kellian Adams of Green Door Labs said as part of her analysis of Unlock the Door, "Having someone cheat your game is way better than having them ignore it." In her words, our "first failure was our first success."[9] In spite of good intentions and solid planning, Unlock the Door was not as successful as we had hoped.

Part Two: The Case of the Missing Wildcat

With a perspective informed by Unlock the Door and the challenges encountered with that game, we started with a clean slate, creating The Case of the Missing Wildcat.

The plot of the Wildcat game revolves around the disappearance of UNH mascot Wild E. Cat, whose presence is needed for a campus pep rally and who was last spotted entering the library. The game leads students through a sequential narrative, during which they discover clues as they learn about service desks, online and physical collections, library staff, and resources through interactive videos, quizzes, and on-screen text. To progress through the game, four chapters (also called modules), each with a specific learning outcome, required completion in order. A further change from our first game was the addition of a digital badge (see figure 9.4), which students are issued upon completion of the chapters.

Figure 9.4
UNH FIRE Library Research Badge, fall 2017

Chapter one provides students with a virtual orientation of the physical library, the library website and discovery search, and the services offered within the library's digital and physical spaces. Delivery of the content came through an interactive video challenge, made using Kaltura, an interactive quiz application within Canvas. It required students to watch while periodically pausing at set times to answer questions on the content (see figure 9.5). The chapter ends with the wildcat's disappearance and the students' quest to locate the mascot.
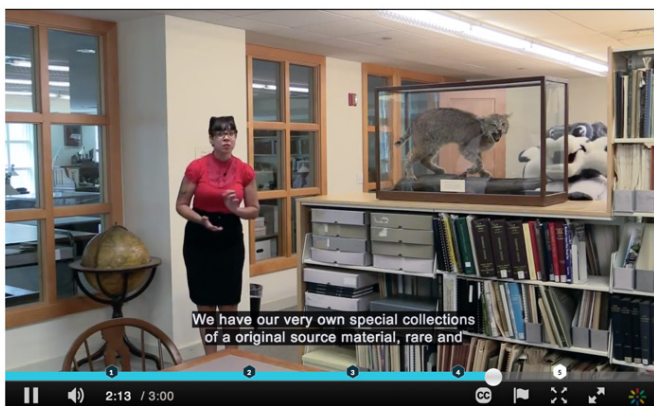

Figure 9.5
The Case of the Missing Wildcat

In chapter two, students find their way to a virtual classroom where a librarian offers tips on strategic research, framed humorously as searching for a wildcat. Students are encouraged to develop keywords and apply search strategies to their research questions. After completing a challenge demonstrating their searching prowess, they find themselves heading to the archives.

In chapter three, students receive information that there is a wildcat in the archives but soon discover that it is the wrong cat; the cat they locate is UNH's real mounted wildcat (Wild E. Cat's "grandmother"), and students must complete an evaluation and assessment challenge to avoid being led astray by "wrong" sources. The lesson includes an introduction to primary, secondary, and tertiary information, a lesson on the strengths, limitations, and situational values of common types of research sources, and factors to consider in deciding which sources best align with students' information needs. After these challenges are complete, the students spot Wild E. Cat again and chase him to the reference desk.

In the final chapter, the students catch up to the wildcat, who they discover is frantically seeking help for a business assignment. This chapter models meeting with the business librarian for a research consultation and provides a lesson on selected business resources from the library collections. Students complete a final challenge to help Wild E. Cat find the information he needs for his assignment, and as the last chapter wraps up, they rush off to the pep rally.

The content of each chapter includes a combination of librarian-created material and adapted video and text-based content from the CREDO Information Literacy Modules (see figure 9.6), a subscription-based resource that provides digital information literacy content that we selected to align with our learning objectives.[10] The use of the CREDO content was helpful in reducing the workload of developing new materials; however, integrating the content into the storyline required creativity, and the technical troubleshooting of embedding the content into Canvas required patience and persistence.

Figure 9.6
Embedded CREDO information literacy modules content

Because a primary goal of the Wildcat game was to increase participation and successful completion, we designed it to reduce the barriers to completion. This happened by integrating the game directly into the FIRE course in the Canvas learning management system and by removing paths to "fail" the game: each game challenge allowed for multiple attempts so that students who persisted would achieve success.

To incentivize participation in the game and to measure student success, we also incorporated a digital badge as a reward for completion. Creating a badge provided an additional gamified component to the activity and gave students a valuable "takeaway," which students could use to show research competency to those outside of the FIRE program. Badging is increasingly popular for informal learning on college campuses as well as in the business world.[11] It familiarizes students with credentialed learning, a concept that they are likely to encounter beyond their college experience, while also helping to build their résumés, as shown in research on employer perceptions of badging.[12] The FIRE program development team embraced the idea and viewed the game as a prototype to encourage other departments to participate in the gamified experience.

Integrating badging into the game presented a number of challenges. UNH does not subscribe to a badging platform, so there were no other instances of badging on campus; therefore, we looked to other universities to see how badging was implemented and structured, both in libraries and in other academic departments. Through our investigation, we selected the Badgr platform, primarily for its ability to integrate with Canvas as an application through the course page. As students complete each module of the game, the Badgr app keeps track of their progress. When all requirements are completed, the application automatically issues a badge to each participant. It also tracks the number of students who successfully complete the game. The students have the badge as a takeaway, which links back to detail the competencies achieved, that they can integrate into various social media platforms to demonstrate their accomplishment. In addition to the badge, students who complete each chapter, and the game as a whole, also receive incentive points toward the FIRE leaderboards.

With all the pieces in place, we tested The Case of the Missing Wildcat rigorously, incorporated feedback from our trial sample, and ironed out technical bugs, such as smoothing out the game narrative and adjusting scoring settings within the modules. After the completion of testing, we embedded the modules into the live Canvas course, with the ability for both FIRE staff and librarians to track student progress. The Wildcat game launched in October 2017 and ran for a three-week period. As we will cover in depth in part three, this game worked, achieved solid participation rates, and had successful completion by the players. We had won a game of our own!

Part Three: Game Insights and Growth

Just as our challenges with Unlock the Door provided insight, our success with The Case of the Missing Wildcat provides valuable lessons for those developing information literacy games. Compared to Unlock the Door, in the Wildcat game students followed a direct path through the game, completing linear tasks to progress toward completion. While

Unlock the Door was open for a relatively narrow window of time, The Case of the Missing Wildcat was open for longer, which gave students greater opportunity to complete the game. Embedding in Canvas improved access to the game, as did heavier promotion and increased incentive within the broader structure of FIRE. The additional incentive of earning a badge helped drive participation, as indicated by students seeking our guidance on how to integrate badges into their LinkedIn profiles.

The Case of the Missing Wildcat still required approximately thirty-five minutes for completion, but unlike the first game, students could play the Wildcat game at their own pace, completing individual chapters separately and then coming back later if needed. More than 175 students participated in this round of the game. A total of 146 students completed the game during the three-week window, totaling about 24 percent of the 600 enrolled FIRE students.* This is a much higher completion rate than Unlock the Door, which had 120 student attempts but zero successful completions. For students who did not complete all modules, they encountered information literacy lessons that they could later apply to their academic work.

For librarians, automated grading and automatic issuing for the badges was key to the success of the game. With only a few librarians and the potential of nearly 600 students completing multiple challenges in each of four chapters, the grading time would have been overwhelming and would have consumed an excessive amount of librarian time. Additionally, the automated issuing of badges saved time and made the process seamless. With three librarians working on the project, the time necessary to grade each quiz by hand would have made the game prohibitive. In fact, the time freed up by the automation allowed the librarians to grow their broader instruction program in new ways and to nurture new collaborations. For example, the business librarian spent more instructional time with upper-level students working on theses and capstone projects instead of doing basic library introductions to thirty sections of first-year FIRE students.

At the end of the 2017–2018 program, the development team surveyed the 600 FIRE students about their experience with the program, and we included several questions about the library game in order to understand more about student interest and motivation for participation. We were also interested to learn more about both the knowledge that students received from the game and their feedback about the game's structure and format for future planning. As seen in figure 9.7, survey results indicated that the majority of participants agreed or strongly agreed that the game was helpful in learning about library resources, held their interest, and, in terms of time, was reasonable to complete.

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* The 2017-2018 FIRE program accepted 600 students, whereas the 2015–2016 enrollment was 650.
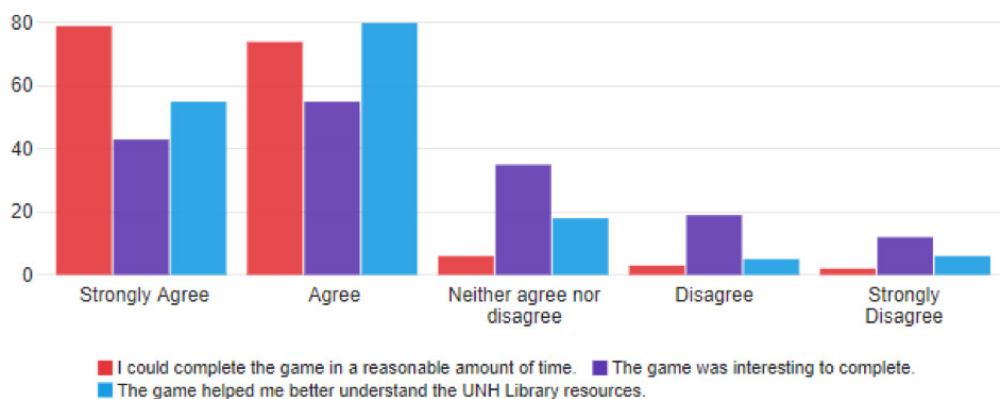
Figure 9.7
FIRE student survey results – feedback on Wildcat game

Additionally, students provided open-ended feedback on their biggest takeaways from participation in the game. Of the 175 FIRE students who responded to the survey (see figure 9.8), the majority of students noted that they learned about the physical library spaces, library resources, and online databases. Other respondents noted citation help, how to do research, becoming familiar with library staff, and learning about services as their most important takeaways from the game. Responses from the students included:

- "I learned how to use the library website to conduct research."
- "There are many ways to find what you need, and a lot of the time there are multiple resources on the topic youre [sic] looking for."
- "The library has many services that I previously did not know existed."
- "It helped me better understand the library's website and the libraries [sic] resources both online and in person."
- "The resources available to me in the library, such as meeting with librarians."

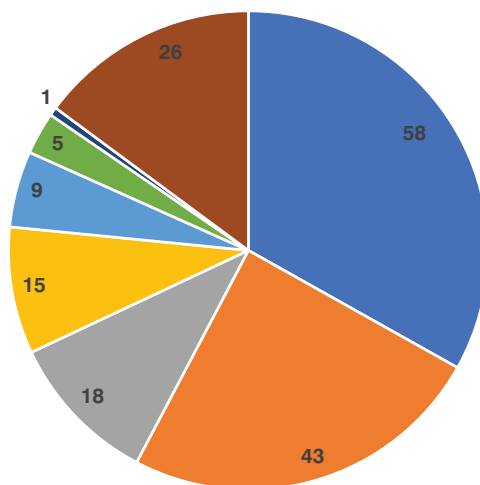What is the Most Important Thing You Learned from the Game

Figure 9.8
FIRE student survey results – What is the most important thing you learned?

Librarians and the FIRE team both perceived The Case of the Missing Wildcat as a success and, as a result, the FIRE program asked us to deploy the game again for the fall 2018 cohort of students. Additionally, the FIRE team requested a second, more advanced information literacy game, with a proposed focus on several relevant business databases. The second game will be launched in the spring 2019 semester in a format similar to the Wildcat game, and with an additional badge credential. Due to the success of the Wildcat game and badge, the FIRE program also brought other campus partners into the badging arena (e.g., Health and Wellness), allowing students to collect more badges in addition to the one for library research. We anticipate this growing suite of badges will increase students' motivation to collect the badges by helping to clarify the concept of badging as wide-ranging and relevant and to other aspects of their academic and student life at the university. By connecting the badging program to other areas, our badges will become more powerful and valuable to students.

The success of The Case of the Missing Wildcat has also provided a model to begin planning additional gamified information literacy badging projects with other campus partners. A pilot project is underway to roll out a brief game for first-year English composition students to earn a Research Starter Badge before attending an in-person instruction session. The composition game will complement lesson content in the Wildcat game so that students who complete both will not have redundant lessons. In addition, we are pitching similar games to each of the other four undergraduate colleges at UNH. We are also currently planning to evaluate the badging infrastructure and assess how a tiered structure might support this program as well as other badging initiatives that have sprung out of the FIRE program. Ultimately, we plan to encourage a wider implementation of information literacy badging at the university by using these games as a proof of concept.

Part Four: Discussion and Recommendations

Our attempts at game development over the past four years have equipped us with ideas on how to proceed if we were to start the process afresh. These include:

- Be willing to pioneer—and don't be afraid to fail.
- Seek partnerships on your campus.
- Set goals and expectations in advance.
- Give yourself the gift of time.
- Be prepared to troubleshoot.

When we started developing games, there was no precedent for educational gaming on our campus. We had to be pioneers, of sorts, willing to test out ideas and see how they developed. This felt risky, but in our case, it led to some rich collaborations. By going out on a limb and taking a chance on creating these games, we demonstrated to our campus our willingness to be innovative and flexible in instruction. Additionally, we are now in a position of expertise among our colleagues. For example, since our work on this project, we have hosted several brown bag discussions with faculty, staff, and administrators on

the topic of gamification at UNH. The risks of failure and challenges to find solutions led to some moments of doubt during the design process, but we forged ahead with a mindset that even if failed, we would learn and take value from our work.

Partnerships were another key to our success. The FIRE program was our first partner to give us direct access to the student body and to help us integrate into their spaces, including their classrooms and their Canvas course pages. Without FIRE, it would have been difficult to coordinate a game and make it accessible to a large number of students, much less incentivize it for participation. Rather than being an add-on component that occurs outside of the classroom, becoming partners is instrumental when libraries seek to reach students in a way that directly affects their curricular work. As stated above, we are now forging a similar partnership with the English Composition program on campus.

Technology partnerships are another rich area in which to develop collaborations. As we developed the games, we sought support from our IT infrastructure and other specialists who could help us develop our skills in game making and in utilizing campus technology platforms. One specific example of this was our tapping into the network of instructional designers on campus, as they helped us to develop video quizzes to integrate into the Wildcat game.

When planning for any type of teaching and learning activity, it is best to set goals, learning outcomes, and expectations in advance, and game creation is no different. Because there were so many platforms to learn, technical challenges with design to overcome, and input from partners to take into consideration, it could have been easy to lose sight of the purpose of the game. Partners and collaborators should be aware of your goals and share your vision for the outcomes as they join you in game design. Having a shared vision for outcomes and measuring them is critical to success.

Beyond the student experience, we designed our games with a goal of saving time for librarians. However, there were more challenges than we anticipated related to the technical aspects of game design and flow. We recommend devoting ample time during downtime in your instructional calendar to design and test the game, perhaps even more time than you might initially expect. The Wildcat game ultimately saved time due to automated grading and badge issuing via Canvas, but required significant up-front time in our summer off-season to prepare and test. We had to create scenarios that followed a storyline, learn new technologies and software platforms, and develop videos that were entertaining and succinct. After the first year of the Wildcat game, the tweaks and updates required to launch it for the second year were much less time-intensive.

Finally, be prepared to troubleshoot quickly or seek out help from experts who can address your problems promptly. The first year we used Badgr, we had to become experts in Canvas application integration. We designed the Wildcat game in a sandbox course where it worked without problems. However, in spite of our testing, the first day we loaded it into the FIRE course page a big part of the game crashed. Luckily, we were able to fix it quickly by referring to online troubleshooting documentation from Badgr, CREDO, and Canvas. Other technical glitches were beyond our capacity and required us to submit help tickets with our campus technology partners and outside vendors. Sometimes these were addressed rapidly but occasionally took longer than we expected. Be ready to become

the squeaky wheel if your game is not working and you need help. We also recommend testing the game with members of the intended audience before the official launch. This can help ensure that the steps in the game do not produce unintended results. Parts of the game will "break" or users will interact with it differently than you may anticipate. Do not be discouraged.

Conclusion

Gamified pedagogy provides a unique opportunity for libraries to engage with students outside of our traditional classrooms and one-shot sessions. As Neil Niman says, "The solution resides in the power of games. There are very good reasons why both the young and old spend hour after hour playing games each week. What has become a popular form of recreation can become the basis for a strategy that seeks to fend off competitive challenges by adding value where it matters most: improving learning outcomes."[13] At UNH and beyond, libraries and librarians can be leaders in this vital new strategy to help students succeed and flourish in higher education.

The proof of concept evidenced by our gamification projects with FIRE has led to a prominent role for our library as a leader and expert not only in information literacy but also in digital pedagogies. Through interest in brown bag workshops on badging and gamification, our consultations with academic technologists about more comprehensive badging across campus, and our fielding requests for more library games, it is clear that our work is being recognized as a model for other faculty and staff exploring badging and gamification within the library and elsewhere on campus.

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