Abstract

Sustainable and effective library video game services can be a challenge to develop and maintain. The University of Minnesota – Twin Cities Libraries explored two common services among academic libraries—a game collection and undergraduate gaming events—and decided to host two game nights as a pilot program. The events were poorly attended, and a subsequent analysis of the unsuccessful events led to a different and innovative approach to supporting games-related research and teaching, based primarily on building effective relationships on and off campus rather than holding open undergraduate events and building collections. This paper discusses the early exploration of video game collections and undergraduate events, the challenges encountered, and the resulting outreach strategies, including programs and activities that leverage access to new gaming technologies, partnerships with student groups, and support of interdisciplinary researchers and instructors. The authors conclude that (a) library video game services should be developed in direct coordination with students or the intended audience, (b) the institutional environment has a major impact on the development of gaming services, and (c) game services are most effective when they support networking, game creation, education, and community outreach.
Video games are nearly ubiquitous in the lives of university students. According to a 2008 Pew Internet Research Study (Lenhart et al., 2008), 97% of teens play video games (para. 3). Most of the people surveyed in 2008 are now college-aged or beyond, and as they have grown up, games and gaming technologies have been increasingly integrated into classrooms and research labs. Academic libraries have responded to this trend with a variety of services. Gaming in academic libraries was initially focused on outreach with events like game nights and tournaments, but also extended into collection services to support research and provide students with access to popular titles. Libraries have also provided space for students to create games, test games, and participate in game jams.

The University of Minnesota – Twin Cities (UMN) is a large, urban research university that offers both undergraduate and graduate programs. The UMN Libraries serve more than 52,000 students with 12 libraries distributed across three regions of campus: the “West Bank” and “East Bank” of the Mississippi River in Minneapolis, and the campus in St. Paul, approximately five miles away. The UMN is a sprawling, urban, commuter campus. Fifty-five percent of students live more than five miles from campus, and 29% of students commute by car (Minnesota Daily, 2014). Video games are being used, studied, and developed in many different departments by students, staff, and faculty, but until recently, the UMN Libraries have not developed video game services to support this work. Informed by the experiences of others, the Libraries initially considered starting a game collection and hosting regular events for undergraduates to build our profile and expertise around video game services, as many other libraries have done.

This paper will discuss the Libraries’ early exploration of video game collections and events, challenges faced, and the lessons learned. It will also describe how the Libraries gathered feedback from the campus community and developed innovative programming based on collaborative partnerships with students, faculty, and staff that reflect the goals of the UMN Libraries.

Literature Review

The 2014 New Media Consortium predicted the arrival of more game-based learning in higher education over two to three years as more institutions bring games and gamification into the curriculum (Johnson, Adams Becker, Estrada, & Freeman, 2014). Hamari, Koivisto, & Sarsa (2014) found that the success of “gamified” courses is highly dependent on the context in which game elements are applied but is largely positive, and other research has shown that the process of developing games in a classroom setting has been shown to positively impact student engagement with both computer science topics and art design (Kurkovsky, 2009).

Similarly, a search of any large interdisciplinary article index reveals that video games and gaming technology are integrated into the research of many disciplines from STEM (science, technology, engineering and mathematics) fields to medicine, sociology, humanities, and the arts. Even if an institution does not have a formal department or program related to the study or teaching of games, students can pursue careers in the
video game industry through majors such as art, 3D modeling, music, and programming (Stuart, 2014).

While library video game programming is most common in public libraries (Werner, 2013), university libraries have generally supported the growing presence of video games in research and the classroom, and have begun to explore how games can impact students’ motivations to study and learn in a library setting. The majority of library programs that use video games to support student success focus on video games as part of multimedia collections or as a component of undergraduate outreach. Video game collections are primarily used to support faculty research and curriculum needs, while library programs for students including collections and events focus on entertainment or recreation. The collection at the University of North Texas acquires games with entertainment value for students while also supporting the research of several departments on campus (Robson & Durkee, 2012). Similarly, Laskowski and Ward (2009) describe the major rationales for gaming collections at the University of Illinois Urbana-Champaign: supporting faculty research; classroom instruction; and the interests of students, including entertainment and study.

Recreational tournaments and game nights are popular for undergraduate library programming. Several organizers cite goals such as advertising gaming collections and facilities, attracting underrepresented students, and promoting other traditional library services such as reference consultations or print collections (Sutton & Womack, 2006; Vanden Elzen & Roush, 2013). Many academic libraries now host regular game nights and incorporate gaming into a larger suite of student outreach activities. For its annual “Helen C. White House Party,” the undergraduate library at the University of Wisconsin-Madison includes a variety of gaming events among other activities1. During the American Library Association’s 2013 International Games Day, 863 libraries participated and 69 libraries (8%) were academic, including The Ohio State University, Kansas State University, and DePaul University (Diaz & Hendricks, 2013; Ekart, 2013; LeFager, 2013).

The abundance of experiences with game collections and events has yielded several sets of best practices and guidelines. Individual circumstances often define the particulars of starting a collection and developing procedures for acquisition and cataloging, but Kane, Soehner, and Wei (2007), Gick (2008), and Laskowski and Ward (2009) provide a wealth of practical guidance and advice for both. Laskowski and Ward offer the most thorough justification for establishing a game collection at a research university that can be adapted for other research institutions. Finally, Tappeiner and Lyons (2008) defined a set of collection criteria for video games that include physical characteristics, content, and value to education, history, and culture. There are also current best practices available for gaming events, focused on open programs targeted to students and teenagers. Werner (2013) and Vanden Elzen and Roush (2013) provide general advice on finding an appropriate space, choosing games, marketing, and measuring impact based on programs run in the Benton Harbor Public Library and the

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1 For information about this event, see: [http://www.library.wisc.edu/college/2014/08/28/6th-annual-helen-c-house-party/](http://www.library.wisc.edu/college/2014/08/28/6th-annual-helen-c-house-party/)
Seeley G. Mudd Library at Lawrence University.

Libraries also have found ways to make students active partners in gaming programs and services. Game labs have become more common in academic libraries and provide spaces for students to build custom games (Wieder, 2011; Robson & Durkee, 2012). For example, student-created or modded games may be considered potential candidates for collections (Laskowski & Ward, 2009). UCLA’s Powell Library developed a partnership with a student gaming group on campus, Enigma, to acquire and co-curate a collection of video game and science fiction books that the student group had originally collected for its private use (Lee, 2015). These examples highlight another trend in academic gaming support: the role of the library as a “hub” of its community (Nicholson, 2008). In a 2008 report, Oregon State University noted that a game collection would help students make connections with each other (Bridges, Hussong-Christian, & Mellinger, 2008), while other libraries used games to build connections with other departments on campus such as the Science and Engineering Library at the University of California Santa Cruz, which worked with the computer science department to create a video game collection and lab (Kane et al., 2007).

Most libraries initially explore collections or events, and then branch out to other gaming programs and services for undergraduates. Indeed, Laskowski and Ward (2009) argue that “[o]ne of the first steps in developing an academic gaming program is building a core collection of materials” (p. 268) and Vanden Elzen and Roush (2013) developed partnerships with student groups as a result of their gaming outreach programs. Gaming labs are also a common starting place, as was the case at the University of Michigan and Miami University Ohio (Wieder, 2011). The University of Michigan Libraries have expanded their gaming programs in recent years, partnering with local makerspaces and meetup groups to host a community hackathon to write 3D gaming programs for the Oculus Rift virtual reality headset and software development kit (Shan & Albert, 2013).

Despite the fact that many libraries choose a collection or game lab as their first gaming service, this can be an expensive and energy-intensive proposition. While many report high circulation numbers (Gick, 2008), video games and console collections face a wide range of issues including broken equipment, new consoles and formats, digital rights management (DRM) software, and multiple viable game formats (Buchanan & Vanden Elzen, 2012; Laskowski & Ward, 2009). Robson and Durkee (2012) provided an update on genres and formats to collect, but the newest wave of consoles face even more challenges with additional equipment, such as the Nintendo Wii U and Xbox Kinect, and new DRM that libraries must navigate (Hamilton, 2013). Recently, Kaltman, Waldrip-Frurin, Caldwell, and Lowood (2014) published a guide to preserving academic game software developed at universities, and in recent years video game preservation research and discussion have exploded (Winget, 2011), but to date there is no evidence that this research has been widely translated into practice for contemporary formats.

Gaming events have limitations as well, particularly in the area of assessment. Some assessment tools have been developed, but the most prominent are designed for public library programs targeted at children and young adults (Gallaway, 2009). Other metrics in the literature attempted to demonstrate value of gaming events based on attendance,
demographics, and anecdotal reports (Sutton & Womack, 2006; Vanden Elzen & Roush, 2013), but none evaluated the long-term impact of gaming services as a whole. A recent literature review by Brown (2014) confirms the lack of established assessment criteria for academic library game programs.

The literature shows that game collections and game events are reliable methods for incorporating video games into existing academic library services. While there are drawbacks and challenges with both, there are also robust sets of best practices and guidelines available. Successful video game services can help facilitate partnerships and make the library a center for gaming resources on campus.

**Pilot Gaming Programs**

A group of UMN library staff interested in video games, including liaison librarians, instructional designers, information literacy assistants, and media consultants, began to explore potential gaming services that the UMN Libraries could develop. The group initially considered hosting a game research showcase but felt the need to establish other gaming services before undertaking this endeavor in order to build the Libraries’ profile around video games. The group also contemplated incorporating video games into library instruction modules but knew this activity would be highly time and labor intensive, and would require buy-in from a number of library units and staff. We wanted to start with a low-cost pilot project that would help us gain administrative and financial support before we proposed a new, wide-ranging service. We were initially hesitant to pursue ideas that required a large investment of time or money, or diverged from gaming services that were proven successful at other institutions.

We considered proposing a video game collection, but it was unclear which selector to approach. The UMN Libraries primarily select materials and offer liaison services that are tied to specific departments and disciplines, but games research occurs within many different departments. We discussed building a pilot collection from donations, as several libraries have done, but even a small collection seemed to present more acquisition and preservation challenges than our group was prepared to handle. We agreed that more assessment was necessary as well as a plan for replacing or preserving the video game technologies. Programming and events seemed like an easier, less expensive way to experiment with gaming and would still provide us with opportunities to assess the interests of our student population.

We looked for event opportunities during the academic year and decided to propose a gaming event that would occur during finals week alongside other popular study break activities. Our goals for the gaming activities were to provide a fun break for students during a stressful period leading up to their final exams, to explore whether students were receptive to gaming in the library, and to solicit feedback to help inform future video game programming. Our proposal was approved and for less than $600 we acquired a Nintendo Wii, extra controllers and nunchuks, and 20 multiplayer party games, such as Mario Party, Super Smash Bros. Brawl and Mario Kart.

We hosted two finals events over the course of a calendar year: one in the spring and
one in the winter. The events were promoted via a weekly email sent to all undergraduates, posters and fliers in all campus libraries, and on the front page of the Libraries’ website for several weeks. We chose to hold the event in a centrally located library on campus, near residence halls and the student union. Gate counts consistently show that this library has the highest traffic year-round.

The first event was held in the library’s media viewing room on a Monday night from 7:00-9:00 p.m. The space has a large television screen, soundproofed walls, and enough seating for a group. The event was held in the evening when there were fewer classes and more students in the library. We put up signs advertising the location but ultimately the event drew only three players, one of which was a security guard who stated that he did not know the room existed (see Figure 1).

![Figure 1. One person plays Super Smash Bros. Brawl at the Spring 2013 gaming event.](image)

Even though the media viewing room had good facilities for gaming, it was out of the main flow of foot traffic. We also assumed that a busy library would mean that more students would be available and interested in participating in the game night, but we observed that students wanted to use their evening to focus on their studies.

We held the next event in a computer lab directly adjacent to the library’s Great Hall, a busy and popular study spot, on a Monday afternoon from 3:00-5:00 p.m. We provided free food, Wii games, and set up free-to-play retro video games on the lab computers. This event drew 33 students, but only 15 came to play video games and the rest stopped by the room for the free snacks (see Figure 2). We observed that although the
library was once again packed with students, most were focused on their studies and did not participate in the event.

Figure 2. Several students and library staff play Mario Kart at the Fall 2013 event.

We invested about 22 hours of staff time per event as well as a small amount of money for snacks and drinks. We expected higher attendance at both events, but the amount of staff time required to set up and host the events seemed disproportionate to the number of students we reached. We assumed that students would welcome the opportunity to take a break with familiar Nintendo Wii games and that they would find the library setting somewhat novel. Instead, we were struck by the low energy in the room, from both students who were observing the event and the players.

We hoped that a few small successful gaming events would give us enough momentum to establish more permanent gaming services, but instead, we had poor attendance and were barely able to justify the staff time and cost. The pilot gaming events prompted a frank discussion and assessment of what library video game programs should look like at our university and the limitations of the original approach.

Obtaining Feedback About Undergraduate Library Gaming Services

After our first event, we realized we needed to assess whether UMN students were interested in library gaming services before putting resources toward additional undergraduate programming. To accomplish this, we surveyed our target audience of first-year students for the finals events, and gathered informal feedback at our second winter study break event.
We conducted the survey during the 2013 first-year orientation, where approximately 3,500 students explore the Twin Cities campus in small groups and participate in a series of activities at different locations. An event at the UMN Libraries had a number of stations showcasing different services, including one station highlighting the Libraries’ finals week study break events and featuring the Nintendo Wii. Students were required to attend orientation activities; so, unlike the poorly attended spring finals event, we had a captive audience, and the gaming station was busy. We handed out a short, informal paper survey about students’ interest in gaming events and library video game collections, and received 579 responses to the following questions:

- Would you attend a video gaming event at the libraries during finals week? Y/N
- Would you check out video games from our library? Y/N

We hypothesized that a strong majority of students would be interested in gaming programs in the library and respond “Yes” to our survey, since almost all college-aged people play video games (Lenhart et al., 2008). However, this was not the case: only 54% of students surveyed would attend a video game event at the Libraries, and 56% of students would check out video games from the Libraries (see Figures 3 and 4).

![Figure 3. Survey response to “Would you attend a video gaming event at the libraries during finals week? Y/N”](image)

Figure 3. Survey response to “Would you attend a video gaming event at the libraries during finals week? Y/N”
We expected that the survey would provide ample justification for the events, and point to other problems with how the events were executed. Instead, our results showed that only a small majority of students are interested in either library game events or a video game collection. We knew that we would need stronger evidence of interest in order to justify putting more time and resources into developing permanent programming and services, even though we suspected that a video game collection would have high circulation numbers as other institutions have reported (Gick, 2008).

The gaming events also provided limited opportunities for assessment, besides attendance numbers and anecdotal feedback. Even though both events were held during a time when the library was packed with students, they drew fewer than twenty people interested in playing video games. The students who attended generally appreciated the opportunity to take a break from their studies, and seven students told us through an informal whiteboard poll that the event had a positive impact on their mental state (see Figure 5). However, we also learned that the students wanted more from a gaming experience than the Nintendo Wii. Some expressed interest in new gaming systems that they do not own and cannot afford to buy, like the Nintendo Wii U, Xbox One, PlayStation 4, or the Oculus Rift virtual reality headset. Others asked if the Libraries could host a local area network (LAN) party or allow students to download graphically-intensive PC games for a future gaming event.
The feedback from the survey spurred us to consider other programming possibilities beyond events and collections, and in-person feedback revealed individual students’ desire for interactive ways to explore new technology and connect with others. We also confirmed that assessing an open gaming event, or any similar type of event, is a challenge in itself, and had to rely mostly on attendance numbers to define success. These findings ultimately led us to modify our approach and invest in services that can demonstrate value to both student needs and the Libraries’ administration.

**Embracing our Environment**

In addition to getting feedback from students, we also critically examined the unique characteristics of the UMN campus, the values of our Libraries organization, and how gaming services fit into that environment.

We modeled our programs on other successful library gaming events but should have better identified how the best practices in the literature apply to our specific context. The gaming events we focused on occurred at public libraries, residential campuses, and universities with small commuter populations (e.g., Werner, 2013; Vanden Elzen & Roush, 2013; Sutton & Womack, 2006). However, the UMN Libraries is a very different environment. As mentioned before, it serves more than 52,000 students with 12 libraries distributed across separate regions of campus. In addition, the campus is situated in a large, urban area and the majority of students commute (*Minnesota Daily*, 2014). When students come to campus, many of them are making a significant investment of time and energy. They have an abundance of places to study and relax, and they might not be as receptive to open video gaming events in the library.
For students who are interested in playing, developing, and learning how to make a career in video games, there are several student interest groups on campus. One group, Glitch (http://glitch.mn), hosts weekly gaming lounges that feature all of the current-generation consoles, as well as PCs where student developers can upload their own games for modeling, testing and debugging. Some time after the pilot gaming events, we met the Glitch organizers and recognized the importance of partnering with them and other student gaming groups, rather than developing similar programming and purchasing new gaming systems. The benefits of these partnerships would extend to both the groups and the UMN Libraries. These groups would gain the Libraries’ support and be able to take advantage of our existing resources and relationships. The Libraries would build valuable strategic collaborations, develop programs relevant to the student body, and increase the Libraries’ visibility across campus.

There are also opportunities to look outside of our institution to partner with other community groups that provide access to games and gaming technologies, even if the Libraries does not have its own game collection. We could work with public libraries, local meetups, and makerspaces to host various events. The University of Michigan Libraries, for example, partnered with the Ann Arbor District Libraries, All Hands Active makerspace, and the Game Makers meetup to host an Oculus Rift hackathon (Shan & Albert, 2013). In addition to hackathons, the Libraries could work with these groups to host game jams, reading clubs, and LAN parties. Fostering these relationships will build on the strengths of both our institutional environment and our community.

New Programs, Strategies, and Opportunities for Collaboration

Evaluating student preferences for gaming and considering our campus environment have led us to conclude that we should support gaming programs that are student-driven, draw upon community resources, and focus on fostering small-scale collaborations. An early collaboration brought the Libraries together with the Society for Physics Students (SPS), an undergraduate group for physics majors. The UMN Libraries’ Web Development department purchased a first-generation Oculus Rift for internal library technology demonstrations. The subject liaison to physics mentioned the Rift to a member of SPS, who later asked to borrow it for an event in April 2014. SPS originally intended to demonstrate various Rift-enabled astronomy applications, but over the course of the event, students brought their own laptops and started testing games that interested them (see Figure 6). The liaison reported that the dynamic in the room transformed from a show-and-tell demo into a collaborative learning environment almost immediately, which led us to consider how to create a similar environment open to everyone on campus. Future directions may include allowing students to check out the Rift or setting up a workstation with gaming technologies available for in-library use. The Libraries are in a unique position to give students, staff, and faculty the opportunity to experiment and learn with emerging gaming technologies.
There have also been opportunities to showcase gaming technology in community outreach projects. The Libraries successfully proposed an interactive art exhibit for inclusion in a city-wide summer art festival in June 2014 that partly took place on the University campus. The exhibit used an Xbox Kinect along with Skanect 3D scanning software (http://skanect.occipital.com), to create an interactive 3D scanning experience for participants. Several librarians built a custom rotating platform and about 156 people were scanned with the Kinect camera while many more observed. The 3D scans were later sent to participants for their personal use, and were encouraged to either download free software to manipulate the scan or find a local makerspace to print their scans on a 3D printer. As a result of this event, members of the campus and the broader community experienced how traditional gaming consoles can be used in nontraditional, creative ways, and provided an opportunity for community members to explore local makerspaces. Future directions may involve approaching local makerspaces and community resources to partner directly on creative projects, and looking for ways to put the scanning technology in the hands of our campus and local community.

Student gaming groups have been another source of fruitful collaborations and we
found that we did not need an existing collection or gaming event to explore how we can work with them. The Libraries partnered with the student group Glitch to start a monthly discussion group called Co-Op Talk (http://glitch.mn/event/co-op-talk/) focused on topics related to the gaming industry. Each month a member of the discussion group proposes a topic, a member of Glitch identifies a game, and a librarian finds a set of articles for suggested reading. Recently, the Libraries, Glitch, and the University Institute for Advanced Studies (IAS) collaborated on a campus-wide event that combined an IAS seminar series with Co-Op Talk. Invited panelists discussed gaming, gender, and identity, and attracted a diverse audience of over 100 people, including undergraduates, graduate students, faculty, and staff. In the future, the Libraries are interested in helping Glitch find a permanent space on campus to hold their own events and house their equipment as well as partner on additional Glitch-sponsored activities.

Another student group, the Video Game Development Club, has built a reference collection of game development, programming, and technology books that they independently purchase, maintain, and lend. This library is used for their game design projects, and presents an obvious opportunity for a liaison librarian to take an active role in helping them find, organize, and distribute the information they use for their work. In addition to assisting them with the library they have built, this group could benefit from awareness of the Libraries’ existing collections, including the books available through the Safari platform, and the host of engineering books we have in our collection.

The Libraries are in a position to facilitate connections between departments, groups, and units that engage in related work. We found that students and faculty who use video games in their work come from a variety of fields, including kinesiology, computer science, history, biomedical and civil engineering, and psychology. Some of the work on video games has been highly collaborative; one project brought together researchers from computer science, electrical engineering, psychiatry, and child development. Several disciplines also use video games in instruction including journalism, design, and computer science, and some classes have students build their own games from scratch. The Libraries want to help overcome potential disciplinary barriers and encourage students and researchers from different areas to meet, share their interests with each other, and spark new collaborations.

Since there is no department for game scholarship on the UMN campus, there is no natural forum to discuss game-based research and learning. To begin to bridge this gap, the Libraries hosted a panel of researchers who are working with video games to stimulate discussions between attendees from different fields. As part of an interdisciplinary series involving the Digital Arts, Sciences, and Humanities program (https://www.lib.umn.edu/digital/dash), the researchers were invited to introduce their work and participate in a lively discussion with the audience. The panel attracted a diverse crowd from faculty to undergraduates, and the discussion included participants from the health sciences, humanities, and social sciences. Over 40 people attended, and several groups coalesced after the event to make introductions, continue the discussion, and arrange follow-up meetings. In the future, the Libraries would like to build upon the success of this panel and help interested parties establish a regular seminar series focused on the work of gaming practitioners. There are other topical
seminars on campus hosted by units such as the Minnesota Nano Center (http://www.nfc.umn.edu) that invites speakers from various engineering disciplines, chemistry, physics, and materials science. A gaming seminar would similarly welcome speakers from a wide range of fields and research interests.

The above examples illustrate how the Libraries have attempted to align gaming services efforts to the needs of students, faculty, staff, and interested local communities. These collaborative initiatives were successful in that they attracted a diverse range of people on the campus and from the community and established new partnerships between individuals, groups, and the Libraries. The next step for the Libraries will be exploring additional opportunities to develop or adapt services for researchers and instructors who use video games, and conduct a research study to learn more about their needs.

**Conclusion**

Most models for building academic video game services are based on collections, recreational events, or dedicated library gaming spaces; however, the UMN Libraries were not successful in our early efforts in these areas. After evaluating our users’ expectations and taking a closer look at our campus environment, the UMN Libraries found that innovative programming can emerge from partnerships with students, researchers, and the broader community. The results from the two pilot game events emphasized that 1) library video game services should be developed with student involvement and feedback, 2) the institutional environment has a major impact on the type of services that should be developed, and 3) game services are most effective when they support networking, game creation, education, and community outreach.

Libraries should not be limited by resources or space, or feel that video game collections and recreational events must precede or define a service. We found that our students want to be able to thoughtfully and creatively engage with video games, and the Libraries embraced opportunities to facilitate students’ peer learning and develop programs for a range of audiences and settings. There is no one approach to successful video game services; academic libraries should explore game technology and applications, respond to the interests of their students and researchers, and develop services that can evolve to support students’ and researchers’ work.
References


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