Games and Activities: An Alternative Foundation for Library Instructional Learning

Toccara D. Porter, University of Louisville

Abstract

Within the setting of academic library instruction a movement in the usage of games has been underway since the early years of the new millennium. One explanation for this trend derives from games facilitating students' understanding of how to interact with information for problem solving and discovery-based learning when using the library to conduct research for class. These are skills that instruction librarians seek to foster in students through information literacy. While the use of games within library instruction has some documented success, there is still much to discover about how best to use games in this environment. Therefore, this article discusses how instruction librarians who are interested in games can find inspiration from other librarians who have integrated games. Further, instruction librarians can begin to focus not only on how games can be played, but how to think about integrating games without fearing a loss of purpose within the session.

Keywords: academic libraries, games, information literacy, librarians, library instruction

Introduction

Think back to the games you have played in your life. These games may have been sports such as basketball or football. Maybe the games were computer-based like Solitaire or Word Munchers. Perhaps the games were of a different variety. My philosophy in the use of games is rooted in the experiences of playing them throughout my life. Scrabble is one of my favorite games, and one thing it taught me was the need to have a strong vocabulary. Losing in Scrabble led to the awareness that if I had known more words associated with the letters W, X, and U, there would have been a higher chance for my staying competitive long enough to win the game. These letters were the last remaining when I had played, and creating words from them was challenging. Therefore in the aim of staying competitive I dedicated more time to studying the dictionary; a practice that still holds true today. Similarly, games, where applicable, can help students who are conducting research identify areas for improvement when interacting with informational sources such as library databases or websites.

The function of using games within library instruction is illustrated in the following examples. For the students who are frustrated from searching in a database, unable to find journal articles, incorporating a game that emphasizes how to generate keywords can help them think about effective ways to approach the search process. For the students who are bored because the topic is on bibliographic citations, a puzzle can be a suitable analogy to guide the discussion. For the students with professors who frequently lecture, an instructional game offers a change from that type of learning to one that promotes learning where students are actively involved. The benefit for students in using games is in the simplifying of library jargon and developing familiarity with library

resources. Alternatively, the benefit for librarians is that games offer another approach which encourages students to communicate with them. These are objectives instruction librarians seek to accomplish within information literacy.

Games and Academic Library Instruction

Historically, the field of education teaches us that the central foundation for learning begins with two things: the teacher and the textbook. In essence, you can listen to someone who is considered trustworthy or read a textbook that is considered equally reputable. Instruction librarians should consider another foundation, where learning occurs through the medium of a game. Games have the capacity to teach people a wide variety of abilities including critical thinking, problem solving, and discovery-based learning. These abilities are connected to the learning outcomes instruction librarians address with students by way of information literacy. For this reason, a developing movement in the usage of games among instruction librarians has been underway since the early years of the new millennium.

Movements arise when there is a need to welcome new methods and ideas that represent a change from established practices. Through the use of games, academic library instruction is currently witnessing the development of one such movement. This movement debuted on a national stage in 2007 at the American Library Association TechSource for Gaming, Learning, and Libraries Symposium.[1] Presenters showcased how games of all types were being tested in libraries. Even though the conference was not specific to library instruction, instruction librarians who attended considered options for future implementation. One attendee, Catherine Fraser Riehle, an Outreach librarian at Purdue University, later formed an exploratory committee to gather information about

the use of games for development of their library's collection, information literacy, and outreach.[2] This conference, which was held the following year in 2008 but has not been offered since that time, offered exposure and the development of the practice of using games. The short history of such events raises questions about not only the sustainability of games within librarianship, but also the suitability of games in the academic environment. This is line with Smale who states, "while the use of games in public libraries often seems like a natural fit, using games in academic libraries is perhaps a less obvious choice."[3] However, there is no denying that these years have created intrigue among instruction librarians regarding the use of games.[4]

Associating the words *movement* and *academic library instruction* might seem odd given that library instruction has existed as a practical method for educating students in the proper usage of library resources since the nineteenth century.[5] After so many years of traditional lecture-based instruction critics could question why there is the need for instructional change. One possible reason for change is traced to the evolution occurring within the larger domain of education in recent decades due to the teaching of a new generation of students. "Young adults born in the early 1980s through the mid-to-late 1990s" make up "Generation M" or millennials.[6] This generation represents students with needs and expectations far different from previous generations in how they interact educationally. These individuals are multicultural, "adept multitaskers, adroit with technology, and abysmal at sustaining long attention spans," which indicate that teachers are educating diverse learners.[7] The implication of such attributes on instructional librarianship is the need to broaden perspectives in ways that accommodate the learning styles of these students.

Why Should Instruction Librarians Use Games?

One of the most important factors to consider regarding the use of games within academic library instruction are the educational outcomes librarians intend to fulfill. The reason to raise this consideration is because the use of games within academic library instruction not only continues to be a developing area of focus, but this area is considered a novel platform from which learning arises in academia.

Yet, games do fit in with academic learning and library instruction when considering diverse learners, but also because the educational emphasis in the 21st century encourages inclusive teaching and learning approaches that are student-centered.[8] Games, when used with or without technology, are looked upon as another method to make this type of learning viable. This is affirmed by Schiller who states, "instruction librarians who wish to teach information literacy to upcoming generations can benefit from looking at video games...because they are an emerging media that play a central role in the development of the current generation of college students." [9] This commentary speaks to our living in a time of educational transformation when learning not only encompasses the study of the inner function of a discipline, but also involves access to an abundance of multi-media educational tools to help communicate these messages.[10] This point is of particular importance to instruction librarians given the need to assess the impact library instruction has on the academic life of a student. Beyond the standard library demonstrations and assessment quizzes, new tools are sought to identify best practices for helping these diverse learners understand how to utilize information in the context of completing class assignments. This is where games have the potential to fill a need. The literature offers several examples of how librarians have used games to

facilitate instruction.

Literature Review

One reason instruction librarians have taken an interest in games is that they are useful for bridging students' understanding of library research concepts. This was the case with Walker, a librarian at Pennsylvania State University who had students play Library Jeopardy during several one-shot sessions.[11] Set up similar to the television game show Jeopardy students answered questions from categories connected with the library such as *Library Homepage* and *Information Literacy IQ*, with a point reward system for each category ranging from 200 to 1000 points.*[12]* This game was incorporated as part of an end of the class review to help students remember points about the library that were introduced earlier in the session.[13] Out of sixty one-shot sessions Library Jeopardy was incorporated eight times, with the notable accomplishments being that students were able to participate in active learning and develop awareness about how to utilize library resources.[14] However, Walker noted there was difficulty in completing the game as a result of not having enough time during a 50-minute session.[15]

Overall, the popularity of Library Jeopardy is indicated by several appearances within the library instructional literature.[16] Librarians who are interested can build on Walker's effort by offering Library Jeopardy as a program that takes place outside of class to avoid time restrictions. Further, this type of game has a higher chance for successful outcomes to be achieved given the likelihood of students' familiarity with the television game show.

Other types of games include Smith & Baker.[17] Utah Valley University Library designed two games: Get a Clue and LibraryCraft. Get a Clue was implemented during

the Fall semester of 2009 over a three-week period for the purpose of introducing "new students to the physical layout" of the library.[18] The game was modeled as a "self-paced experience" that should last no longer than thirty-minutes.[19] Students were given clues that were strategically placed throughout the library to solve. The success of Get a Clue led to the game being revamped in 2010 with changes that included some English faculty giving students extra credit for participation and distributing surveys to students for feedback.

The second game, LibraryCraft, transitioned focus from the physical landmarks in the library to the online resources. The objective of the game was to guide "students around the library website."[20] Designed to emulate the gaming experience of the World of Warcraft librarians crafted a medieval story where students selected avatars to complete tasks such as locating a book from the catalog. To assess the experience student surveys were also distributed. Fifty-two students responded, noting such things as how the game "helped them learn more about library resources" and "made learning how to use resources fun."[21]

Distance Education is another platform in which librarians have explored the use of games. This is represented in the work of Scott Nicholson, a leading pioneer on the study of games and libraries, who is the Creative Director of the *Because Play Matters* Game Lab at the Syracuse University School of Information Studies.[22] Nicholson has produced several works including *Gaming in Libraries-The Course*, an online class taught as a video series in which various aspects of games are addressed.[23] The 3D virtual simulation Second Life has also been used to support distance education.[24] Two faculty members at the San Jose State University School of Library and Information Science

shared their experience of co-teaching a library and information science course in Second Life. The class was offered as a way for students to show "mastery" of the program's "core competencies" including "demonstrating proficiency in the use of current information and communication technologies.[25]

The focus of games in this environment along with futuristic simulations like Second Life offer avenues to support distance education in ways that are innovative and inclusive to all students.[26] However, using games within distance education also brings with it concerns about suitability. As an educational platform that is non-traditional, many students who enroll in distance education programs are also non-traditional; that is, those who are "older," have parental obligations, and may need the face-to-face classroom support more than students in the traditional college age group of 18-21 year olds.[27] Would the use of games with these students be productive given those circumstances and the need to remain focused on retention?[28] Second, the use of games can be challenging for teachers to expand the curriculum to support such technology through the use of non-traditional tools. Games may not yet provide immediate answers to these questions. Nevertheless, the continued exploration in the use of games is needed to assess whether these tools can have a lasting imprint on distance education.

Beyond the above examples several other works highlight different ways to incorporate games within library instruction settings.[29] The literature demonstrates that librarians have considered it worthwhile to incorporate games for the purposes of active learning, distance education, general library orientations, and more. This level of integration within this developing movement does not signify the need to surrender traditional lecture-based practices. Instead, it represents the bringing into play of an

alternative method to use alongside of it as a backup when traditional methods prove unsuccessful or are in need of renewal.

Implementing a Library Instruction Game at the University of Louisville

Located in Louisville, Kentucky, the University of Louisville is a metropolitan research university with 22, 249 students as of the Fall 2011 academic year. The University has three campuses with programs offered for students by way of classroom-based and online learning up to and including the Doctoral level. There are seven libraries at U of L with collections of more than 2.2 million books, journals, electronic resources, media and microfilm. The Ekstrom Library is the general campus library and is also home to the Information Literacy Department, which has seven instruction librarians, and one professional staff member. Undergraduate students in the Departments of Communication and English primarily comprise the majority of classes that are taught. Since 2010, one area of focus for instruction librarians in the Information Literacy Department has been the development of instructional experiences in which students actively participate. This has been achieved through the use of group activities, games, and other methods. The following section discusses the author's journey in implementing games for use within library instruction.

Before I was ready to integrate games into my library instruction environment there were several barriers to overcome. First, I was a newly minted librarian. Adding such a different component into library instruction when I had no prior experience using games in this setting seemed risky. Second, in talking with other librarians about why they did not use games other questions came to mind. What unexpected things could happen? Would there be enough time in a 50-minute session given the likelihood that games will

require extra time for setup? When games are the topic of discussion it is easy to bypass the simple and imagine them in all of their complexities—joysticks, cartridges, software downloads, one or two player gaming modes, etc. This can create a complicated picture that obstructs the relevance of games to library instruction. Understandably these reasons may seem justifiable enough to dismiss the idea of games altogether, which often serves as stumbling blocks for many librarians. Unfortunately, when this happens, the conversation about games usually ends. However, rising above my reluctance to use games was made possible when I embraced a new mindset: keep it simple. I had done the necessary research about games and asked the critical questions, but now, it was time to plan and implement.

Online Jigsaw Puzzle Activity

An online jigsaw puzzle is a strategy I incorporated and wrote about.[30] This activity was used in an English 102 session to introduce students to bibliographic citations. The class consisted of undergraduate freshmen and sophomores. At the beginning of the session we went directly into the puzzle activity, completing two of them. The usage of the puzzle was suitable as an analogy to help students think about the construction of a bibliographic citation. For example, in order to complete a puzzle to see the image it conveys the individual pieces have to be pieced together in the appropriate areas; otherwise the puzzle is incomplete. Similarly, the same is true of a bibliographic citation. For example, the parts of a citation for a book entry include such data as author name, title of the book, publisher, and year of publication. If that data is not pieced together properly students may not be able to retrieve the work when searching in the library catalog or identify the source format. There are other points of emphasis you can

also include with this type of activity. For example, discuss how this applies to formatting citations in styles such as APA and MLA or address how citations are organized differently for journal articles. Essentially, the puzzle represented a starting point from which we began the discussion about bibliographic citations.

Wordle Activity

At the end of this article readers can find a sample gaming idea for a Wordle activity. Although not a game in the traditional sense *Wordle* is another tool that librarians can harness.[31] Wordle is a website that creates word clouds in various colors, layouts, and sizes. The purpose of the activity I created was to model a real-life situation in which students are assigned the research topic of LeBron James and need to identify keywords for use when searching in a database. Library staff at Indiana University Southeast in New Albany, Indiana participated in this teaching demonstration to learn about how I had incorporated games. LeBron James was selected as the sample topic because at the time he was prominent in the news regarding his decision of leaving the Cleveland Cavaliers to join the Miami Heat. Each person created their own Wordle and upon completion the keywords from each person was combined into one large Wordle that was shown on the projector screen. This facilitated discussion about why keyword choice is important when searching in a database. An exercise like this also gave the staff practice in communicating how to describe a topic to help structure its focus for a research paper. For instance, the Wordle can assist them in identifying whether to write a biographical paper about the basketball career of LeBron James or address the financial ramifications the city of Cleveland has incurred as a result of James' departure.

We later used the keywords to run sample searches in the database Academic

Search Premier to find journal articles. Both the Wordle and online jigsaw activity averaged between 7-10 minutes to complete.

Practical Tips for Instructional Gaming

When starting out in the use of games adopting a simple approach is a great way to build confidence. Simplicity supports the librarian being able to successfully integrate play within the allotted session time and adopt rules of play that students can quickly comprehend. Therefore, simple games include those that:

1. Can be incorporated with or without technology
2. Have a 1-2-3-step process of understanding the rules of play
3. Require less than 10 minutes

Further, let your imagination wander. It is a game after all. Have fun thinking about different ways learning can be made possible. Implement games that play to your strengths as a teaching-librarian. For example, if you enjoy online learning use an online game or if you like asking questions try a brainteaser. Incorporating games is not suitable for every instructional situation therefore base your decision on considering what games can do differently from that of a standard demonstration.

Instructional Gaming in the Future

The long term potential of gaming within academic library instruction depends on such things as advocacy, collaboration, and the support of discovery-based learning. Instruction librarians who have incorporated games successfully should continually share their stories. Advocacy brings about the awareness that traditional lecture-based demonstrations can be combined with games without the need to sacrifice one method in favor of the other. Collaboration through professional learning communities dedicated to studying the use of games offers instruction librarians who are interested but have doubts

supportive resources to draw upon for inspiration. These activities can contribute to the creation of learning environments that foster the exploration and discovery of new approaches to instructional teaching.

Conclusion

The games movement in academic library instruction asks us to consider another foundation for learning through the medium of a game. Games have the capacity to teach a wide variety of skills related to communication, problem solving, and discovery-based learning. These are skills instruction librarians have long sought to develop in students by way of information literacy instruction, which encourages students to have an active role within their learning experiences in the library. As academic librarians become further connected to the role of advocate for student learning, exploring alternative methods, which supplement traditional lecture-based demonstrations, should be welcomed by instruction librarians. There is no guarantee students will be receptive to games. However, games can be another option to try in the aim of helping students make tangible connections with learning and the library. When instruction librarians are able to establish trust with students via games and similar activities they will discover that together, games and library instruction, can be a good mix of opposites attracting. This article serves as a reminder that incorporating games does not require the use of complex gaming components; instead, open your eyes and draw from the simple ideas around you.

Sample Gaming Idea

Type of Game: Wordle Word Clouds
Web site: http://www.wordle.net

How does the game work?
The purpose of the Wordle activity is to help students' generate keywords for use in searching in a database. This activity encourages students to participate in active learning and enables librarians to break the monotony of standing in front of the class lecturing on how to search. You can select a topic connected to a class assignment or ask for suggestions from students. Follow the steps below to create a sample Wordle:

1. Go to the Wordle website.
2. Select the Create You Own link.
3. This opens a box to insert keywords either side-by-side or one below the other.
4. When finished entering the keywords click the Go button.
5. The Wordle is now created.
6. Have the students incorporate these words for use to search in a database.

The Randomize button displays the Wordle in various colors and layouts. The Gallery option on the top menu showcases Wordle's created by random people. The Wordle can be saved by selecting the **Open in Window** button and then selecting the **Save to public gallery** button. From there you can name the Wordle and direct people to the URL for viewing. More information can be found on the FAQ link on the top menu.
Other ways to implement Wordle:

- *Facilitating Group Discussion*. Have you ever had students' working in groups who need some urging in communicating with each other? Use the Wordle as a tool to prompt student discussion. For example, have students create a Wordle and use it as a starting point to facilitate discussion for a group activity on evaluating sources. Another activity could involve having students' complete a short activity and then reflect on the assignment by creating a Wordle.

- *Topic Formulation Strategy/Brainstorming*. At the beginning of the session take five minutes to go around the room and ask each student to briefly explain their research topic. In the aim of helping students who are having trouble communicating their topic incorporate the Wordle by having students describe words about the topic. Use this example to encourage students that even though they may not leave the session with a topic identified they can use this approach as a starting point to develop ideas.

Materials and Equipment Needed: Computer with Internet access.
Time Required: 10 minutes.
Audience: High School or Undergraduates.

[1] ALA TechSource and Association of College & Research Libraries. (2007). "Gaming, Learning, and Libraries Symposium (Conference) Retrieved July 3, 2011, from http://www.ala.org/Template.cfm?Section=archive&template=/contentmanagement/contentdisplay.cfm&ContentID=161433

[2] Pierce, Jennifer Burek. "It's Not All Fun and Games: Academic libraries apply scholarship to virtual play." *American Libraries.* 40, no. 4 (April 2009): 61.

[3] Smale, Maura A. "Learning through Quests and Contests: Games in Information Literacy Instruction." *Journal of Library Innovation* 2, no. 2 (2011): 36-55.

[4] Doshi, Ameet. "How Gaming Could Improve Information Literacy." *Computers in Libraries* 26, no. 5 (2006): 4p; Harris, Amy. *Gaming in Academic Libraries: Collections, Marketing, and Information Literacy*. Chicago: Assoc. of College and Research Libraries, 2008; McDevitt, Theresa R. *Let the Games Begin! : Engaging Students with Field-Tested Interactive Information Literacy Instruction*. New York: Neal-Schuman Publishers, 2011.; Smith, F. A. "Games for Teaching Information Literacy Skills." *Library Philosophy & Practice* 9, no. 2 (2007): 1-12.

[5] Grassian, Esther S., and Joan R. Kaplowitz. *Information Literacy Instruction: Theory and Practice*. New York: Neal-Schuman Publishers, 2009; Roberts, A.F., and S. G. Blandy. *Library Instruction for Librarians*. 2nd rev. ed. Englewood, CO: Libraries Unlimited, Inc., 1989.

[6] Cvetkovic, Vibiana Bowman, and Robert J. Lackie. *Teaching Generation M: A Handbook for Librarians and Educators*. New York: Neal-Schuman Publishers, 2009: 3.

[7] Ibid., p. xii.

[8] Brookfield, Stephen, and Stephen Preskill. *Discussion as a Way of Teaching: Tools and Techniques for Democratic Classrooms*. 2nd ed. San Francisco: Jossey-Bass, 2005.

[9] Schiller, Nicholas. "A Portal to Student Learning: What Instruction Librarians Can Learn from Video Game Design." *Reference Services Review* 36, no. 4 (2008): 351-65.

[10] Bonk, Curtis Jay. *The World Is Open: How Web Technology Is Revolutionizing Education*. San Francisco, Calif.: Jossey-Bass, 2009.

[11] Walker, Billie E. "This Is Jeopardy! An Exciting Approach to Learning in Library Instruction." *Reference Services Review* 36, no. 4 (2008): 381-88.

[12] Ibid., p. 383-384.

[13] Ibid., p. 385.

[14] Ibid., p. 387.

[15] Ibid., p. 387.

[16] Fowler, Kristine. "Jeopardy in the Library: The University of Minnesota Library's Science Quiz Bowl." *College & Research Libraries News* 69, no. 9 (2008): 526-29; Leach, Guy J., and Tammy S. Sugarman. "Play to Win! Using Games in Library Instruction to Enhance Student Learning."

Research Strategies 20, no. 3 (2005): 13p; Krajewski, Patricia R., and Vivienne B. Piroli. "Something Old, Something New, Something Borrowed, Something Blue: Active Learning in the Classroom." *Journal of Library Administration* 36, no. 1 (2002): 177-94; Paterson, Ellen R. "Sharing Skills: Ready Reference Jeopardy and Wheel of Fortune; Fun Games to Review Basic Reference Sources and More." *School Library Monthly* 9 (1992): 35-37; Thompson, Debra M. "Library Jeopardy: A Fifteen-Minute Orientation for Teachers." *School Library Monthly* 10 (1993): 36.

[17] Smith, Anna-Lise, and Lesli Baker. "Getting a Clue: Creating Student Detectives and Dragon Slayers in Your Library." *Reference Services Review* 39 (2011): 628-42.

[18] Ibid., p. 632.

[19] Ibid., p. 631.

[20] Ibid., p. 635.

[21] Ibid., p. 638.

[22] Nicholson, Scott. "Because Play Matters Game Lab, Syracuse University School of Information Studies." http://ischool.syr.edu/research/researchcenters/bpm.aspx (accessed May 18, 2012).

[23] Nicholson, Scott. "The Role of Gaming in Libraries: Taking the Pulse. White Paper." 2007.; Nicholson, Scott. "Gaming in Libraries Class." http://www.gamesinlibraries.org/course (accessed July 3, 2011).; Nicholson, Scott. "Creating a Gaming Experience in Libraries." *Digitale Bibliotheek* 1, no. 5 (2009): 11; Nicholson, Scott. "Gaming and Literacy: Exploring the Connections." *Digitale Bibliotheek* 2, no. 4 (2010): 42.

[24] Haycock, Ken, and Jeremy W. Kemp. "Immersive Learning Environments in Parallel Universes: Learning through Second Life." *School Libraries Worldwide* 14, no. 2 (July 2008): 89-97.

[25] Ibid. p. 92-93.

[26] Ibid 10

[27] Carr, Sarah. "As Distance Education Comes of Age, the Challenge Is Keeping the Students." *Chronicle of Higher Education* 46, no. 23 (2000).

[28] Ibid.

[29] Ibid. 4

[30] Porter, Toccara. "Online Jigsaw Puzzles: Using Online Jigsaw Puzzles to Break the Ice in Information Literacy Sessions." In *Let the Games Begin!: Engaging Students with Interactive Information Literacy Instruction*, edited by Theresa R. McDevitt, 9-11. New York: Neal-Schuman, 2011; Crea-Soft. "Free Online Jigsaw Puzzles: X-Plosive Jigsaw Puzzles Online. Puzzle Yourself Out!" (2012). http://www.crea-soft.com/online-jigsaw-puzzle/ (accessed July 3, 2011).

[31] Feinberg, Jonathan. "Wordle." (2011). http://www.wordle.net/ (accessed July 3, 2011).