# Creating Analog and Digital Games for Reference Training

## *Overview and Examples*

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To provide effective service at the reference desk, proper training for those staffing the desk is essential. Those responsible for reference training know that developing trainings that are both effective and engaging can be a challenge. In this column, Sam Kirk discusses the benefits of gamification in trainings. She describes how the University of Pennsylvania Libraries have used low-cost strategies to gamify their reference training for library interns. She shares examples of different types of games that can be used to scaffold learning for interns, culminating in a final, comprehensive game.—*Editor*

Training interns to supplement reference services is a challenging but essential practice in maintaining quality interactions with patrons. With the proliferation of educational games in workplace contexts, several libraries have published descriptions of their efforts to gamify training practices. This article provides an overview of notable examples of digital and analog library training games and supplies a detailed list of examples from the intern reference training program at the University of Pennsylvania (Penn) Libraries.

Reference and information services at Penn Libraries, as with many academic libraries, operate with the support of trained interns. While full-time staff answer the majority of our chat and e-mail reference questions, the information desk is staffed by interns. The information desk is located at the front of the largest library on Penn's campus, the Van Pelt-Dietrich Library Center, and is just one of the reference service points in a network of departmental libraries and learning commons. Patrons come to the information desk with questions on a range of topics, from technology assistance to directional questions to known-item and ready reference inquiries. Research-intensive questions that originate at the information desk are referred to on-call librarians, or, if preferred, interns will assist patrons in booking an appointment with a subject specialist.

Interns are patron-facing staff without the same institutional knowledge or level of training as full-time staff, yet are expected to provide a high level of customer service in making referrals, supplying directions, and answering questions about services and policies. Helping interns acquire competency in these areas requires considerable investment in training time.

In some of our conventional training methods, we ask trainees to read text, give presentations, take quizzes, complete online modules, participate in discussions, review anonymized chat transcripts, and conduct mock reference

interviews. As part of our training program for the information desk at Penn Libraries, we have developed a number of digital and analog (i.e., board and card games) training games to complement traditional training methods. Training games are not replacements for traditional training techniques but valuable additions and knowledge reinforcement tools. While the content in these games is specific to our institutional policies and services, the rough structures of the games can be applied anywhere and at little cost. This article will give a brief overview of past literature on games used for library staff training and then provide detailed explanations of the games used in Penn Libraries reference training.

## STAFF TRAINING GAMES IN LIBRARIES

Training games are a type of "serious game," those that "have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement."[1] Using games as an instruction method, both in education and workplace environments, has been applied in contexts ranging from fashion retail to health and medical education,[2] and the library workplace is no exception. In 1993, in an early example of analog game use for library training, the American Library Association (ALA) published a training manual on the topic of confidentiality, accompanied by a card game.[3] Libraries have subsequently used games for training stacks attendants,[4] practicing circulation and technical services tasks,[5] and deciphering the maze of abbreviations and acronyms that accompany library work.[6] Most relevant to this discussion are instances of gaming to train for reference work. Scott Rice, Coordinator of Technology Services, and Margaret Gregor, Coordinator of the Instructional Materials Center, both at Appalachian State University, codeveloped a "Library Adventure Game" to train staff to complete reference scenarios and made their game files freely available online.[7] Carnegie Mellon developed a "Library Arcade" hosting two games: "I'll Get It," where the main game character acts as a library staff member to help answer reference inquiries from students, and "Within Range," which teaches students how to shelve using the LC classification system.[8] Each of the games could be used for either staff training or for student instruction, as with many of the myriad information literacy and library resource navigation games developed by intrepid librarians and technologists.

In addition to adding standalone games to internal training, libraries have also begun to use broader gamification strategies. Gamification is the use of game elements, such as leaderboards, in what would otherwise be ordinary, real-world activities. In his Winter 2014 *RUSQ* column "Accidental Technologist: Gamification in Libraries," Kyle Felker describes two types of gamification applications: employing "game-like structures and systems" onto already-developed activities and designing educational opportunities as games from the outset.[9] Libraries with existing training programs would need to invest a significant amount of time in entirely rebuilding their programs using game structures, and so the former approach is often used. The Eckerd College Library, for example, outlined their experience in successfully adding micro-credentialing, as well as other modifications, to their existing Access Services student training program.[10]

With a number of books, articles, and even webinars on games and gamification techniques for libraries, there is no shortage of advice for those looking to complement their training procedures with gaming elements.[11]

## STAFF TRAINING GAMES AT PENN LIBRARIES

Our reference staffing models have changed many times over the years, along with the length of time we set aside for training. In our current model, our information desk cohort of five to six interns falls under the Van Pelt Access Services team. They are hired during the same period each summer, receiving general onboarding and continuing training from Access Services in addition to reference training from staff in the Teaching, Research, and Learning division. Internships typically last one year, making way for a new cohort each summer. While not every cohort has the same training experience, for the last four years, groups who staff our information desk have trained with most of the games below. Some require online access to library databases and resources; others are nondigital card and board games.

### Penn Known Item Relays

Our information desk interns regularly receive questions about known items: citations of books, book chapters, articles, or other works that patrons would like to retrieve. The Penn Known Item Relays is a crash course in navigating our catalog, federated search tool, and link resolver to access known items. The title is a play on the Penn Relays, the famed track and field event hosted at our university. Our game involves a set of eleven citations: a mix of books, book chapters, and journal articles. Some are freely available online, others are available only in print in the stacks, and a few aren't immediately available at all. Each member of the training cohort must determine what type of citation they are seeing and then use our library systems to get to the full text. If the full text is not available online, the trainee must either find the call number for the item in print or decisively prove the item should be requested from interlibrary loan. Once a citation is completed, the trainee can pass the keyboard to the next cohort member to work on the subsequent citation. As a competitive incentive, we have tracked the best cohort time and best individual time for years, posting the new time-to-beat at the top of the page.

### Photo Scavenger Hunt

It is essential for patron-facing service staff to be able to provide directions to restrooms, classrooms, group study rooms,

stacks locations, and core service points. For new interns, who will be expected to provide such directions at the end of their training, a tour of our seven-floor main library can be overwhelming. We use a traditional scavenger hunt to help reinforce directional skills. Trainees are given a list of seven locations and items and must take a photo of each within an hour. The list is a mix of must-know classrooms, seminar rooms, media labs, and reference books. Depending on the size of the cohort, either the entire group will complete the scavenger hunt together or the cohort will be broken up into competitive teams.

## Services Taboo

Teachable moments about library services are hidden within many reference interactions. A student asking for scanners seems like a technology or directional question but can also be an opportunity to talk about our Scan and Deliver service. A different student asking about 3D printing and modeling might not yet know about our 3D scanners. The more our information desk interns know about the unique services we offer, the better they can serve our patrons. In addition to a training discussion about Penn Libraries services, we use the game *Taboo* to help students remember them. *Taboo* is a Hasbro card game in which players must lead others to guess the word on their card without being able to say the word itself and without saying several related words listed on the card. We have created a version of the game with Penn Libraries services standing in for taboo words. For example, an item listed on a card might be "Poster Printing." The trainee would have to describe the poster printing service to their fellow trainees without being able to say either "poster" or "printing." This leads to amusing results but also reinforces concepts from earlier in training. A trainee might say, "One of the only media lab services that costs money," or "One of the services available at both the Biomedical Library and the Van Pelt Library." These definitions require the interns and students to recall important facts about our services, several of which the interns would have encountered during their scavenger hunt to key locations.

## Access Sorting

Anyone staffing the information desk will need to answer questions about building and technology access policies. Our sorting game includes one deck of cards with potential patron types (e.g., Graduate Student; Spouse of Staff; Alumnus) and another deck with access policy statements. For facilities, one statement reads: "Ability to access the building anytime except for finals." For technology, another statement claims: "Ability to use Guest wireless service only." Trainees are first asked to sort patron types based on facility access statements and then on technology access statements. We discuss various exceptions to policies for each situation. This short game helps trainees to prepare for the larger-scale Access War game to follow.

## Access War

Access War is only so-named because the movements resemble those of the card game War. One deck contains potential patrons (e.g., Swarthmore Graduate Student; New York University Undergraduate Student; Retired Staff), and the other deck contains the names of services, technologies, and statements about access permissions. Each deck is shuffled separately. During a turn, a trainee pulls a card from each deck, then determines whether or not the patron could have access to the service, technology, or space. For example, if a trainee drew "New York University Undergraduate Student" from one deck and "Print a Research Paper" in another deck, the correct answer would be that yes, this student could print a research paper at our library if they purchase a courtesy print card. Trainees who answer correctly keep the pair of cards, and the person with the most pairs at the end of the game wins.

## Penn Libraries: The Game

All training games and modules culminate in Penn Libraries: The Game, a cumulative test of all the services, policies, referrals, and locations covered during the training period. The board game takes the shape of our main library floor plan pasted onto leftover cardboard. Trainees start their game pieces on the ground floor of the library and must work their way up the building by stopping at designated places on the east and west side of each floor—an exercise that reinforces directional skills and map reading. Each room has a different color, representing the question categories: technology (blue), directions (red), services (brown), policies (green), and wild card (pink). When a trainee stops their game piece on a room, they must answer a question in the designated color category to proceed. The participant who makes it to the top floor and answers their question correctly first wins.

The 100+ questions usually make an attempt at humor, and themes run through multiple questions. Attentive trainees soon realize that a mysterious character who appears in multiple questions is actually meant to be a time-traveling David Rittenhouse, the eighteenth-century Philadelphia scientist. Penn alums like Elon Musk and Vanessa Bayer make appearances in the game, as do other celebrities. To continue expanding the game, we write new questions each year specific to the training cohort's interests. One cohort was inexplicably obsessed with Jerry Seinfeld's *Bee Movie*, the 2007 animated film, and made frequent references to this movie throughout the school year. They were surprised and amused to find a *Bee Movie*–related question in the game at the final play of their internships in June. Some example game questions follow:

Q: You are suddenly struck with an urgent and powerful desire to be surrounded by lime green walls. Is there anywhere in Van Pelt that could accommodate you?
A: The Hechtman Recording Studio, room 322.

Q: A man dressed in a tri-corner hat, knee-high socks, and a powdered wig has a question for you. "I'd like to see a list of all the books I've checked out in the last 200 year—I mean days." Who can provide this list?
A: No one. Circulation does not keep records of past check-outs.

Q: Tim Burton silently taps you on the shoulder. "I've heard you have a sample of Vantablack. Where might I see it?"
A: The Materials Library in the Fisher Fine Arts Library.

In the advanced version of the game, before a trainee can move up a floor, they must make a correct subject liaison or bibliographer referral, having been asked a question such as "Who is the liaison to Urban Studies?" We apply the advanced rules to the game when the cohort has worked for at least one semester.

## MATERIAL COST

From the sheer number of games, one might think we've spent a fair amount of money on production materials, but this isn't the case. All of the cards used for our games were old card catalog cards slated for recycling with questions taped over them. Our board game is made of cardboard that came from a box holding paper reams.

There are several affordable library-related games available for purchase online which make fantastic additions to any training practice. *Search and Destroy*, the database searching game developed by two librarians at Ferris State University, is one of our favorites.[12]

## CONCLUSION

In order for games in training to be worth considering, they must also be effective. Fortunately, serious games are both teaching and assessment instruments: the observer can easily see which participants have retained and can apply knowledge from training and which participants need a refresher. In addition to the other quizzes and exercises administered during the course of training, performance during Penn Libraries: The Game serves as the final and most definitive assessment of training content.

A considerable amount of preparation went into making each of these games. For those interested in creating a similar cumulative game to Penn Libraries: The Game, know that it will take some time to write a robust question set. The other games take much less time to set up and require only listing out various patron examples, services, and policy outlines. When thinking about how to construct a series of games, consider beginning with simple recall tasks, such as the Access Match game, and moving onto scenario-based applications, such as the ones presented in Access War or

Penn Libraries: The Game.

With the amount of time invested, librarians considering gamifying their training programs might wonder whether the effort is worthwhile. To us, a recent cohort made the answer to this question clear. As their year together concluded, the interns contemplated how to coordinate their schedules to play Penn Libraries: The Game one final time. They considered bringing the game to a happy hour and playing outside of work time to challenge the reigning champion, an intern who had won two times in a row. Perhaps the other cohort members were simply competitive; maybe they wanted to exhibit the skills they had accrued throughout the year. To training staff, though, seeing the mere desire of interns to bring out the game and play meant that the time spent developing these training tools had been worth it.

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