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## OPEN THIS BOX: LEVERAGING THE POPULARITY OF ESCAPE ROOMS TO CREATE AN ENGAGING LIBRARY INSTRUCTION SESSION

#### AMBER WILSON AND JESSICA RIEDMUELLER

#### INTRODUCTION

As any library instructor knows, maintaining student interest in a one-shot library instruction session is a compromise between education and entertainment. Library scavenger hunts attempt to strike this balance. However, most non-librarian created scavenger hunts fail to teach the proper information literacy skills and place a heavy burden on the librarians at the reference desk. This results in an ineffective, passive learning experience. In response to requests for these type of "entertaining" activities, we designed a library session that relied instead on interactive engagement with the library's resources. We struck upon the idea of an escape room due to its popularity and reputation as a fun challenge. As Margino (2013) observes, "Game-based learning in libraries presents a solution to facilitating student's engagement with instruction content, self-discovery of information, and learning through trial and error" (p. 334). We were surprised to find that many of the same critical thinking and analysis skills useful in a commercial escape room overlap with the skills that college students need to become efficient and information literate researchers. We built our scenario so that students work through the research process by solving puzzles using library resources, finding the different types of academic sources that they would theoretically use to write a research paper.

#### LITERATURE REVIEW

Library games are not a new venture, and we benefitted from an examination of several sources. We were encouraged by Markey et. al's (2009) research finding that students respond well to library research games that "are an integral component of the course curriculum" (p. 311). This applied to our main partnership with Dr. Taine Duncan, a philosophy professor, as we established an environment where her students could immediately apply the research concepts that they learned in the escape room. Additionally, Smale (2011) reviewed multiple digital and non-digital library games and concluded, "The benefits of games-based learning-increased student engagement, motivation, and, ultimately, greater learning--are too compelling to ignore. Games-based learning has the potential to transform information literacy and library instruction" (p. 49). We found this to be true as students enthusiastically pursued the game and raced to beat the clock even though they were not being graded. Finally, Hughes and Lacy (2016) discuss the higher value of intrinsic motivation in games as opposed to the extrinsic motivation in gamification, which reinforced our decision to build a game that students completed as a part of a class rather than a scavenger hunt that they completed for a grade.

Although we found quite a bit of research on library games in general, we did not find anything discussing escape rooms for the library. As an escape room-style game was always our intent, we set out to see if it could be done.

#### **DESIGN AND PLANNING**

Like Giles (2015), our game was never meant to replace a traditional information literacy session. It is unlikely that we would ever achieve the outcomes of the ACRL Framework for Information Literacy for Higher Education within a 50-minute game. The game instead offers students the opportunity to explore information literacy concepts in a fun environment. In addition, the escape room concept helps minimize library anxiety and makes the librarians more approachable by making a game out of the

research process and meeting students in their comfort zone instead of a rigidly-structured classroom. The gaming actions of searching and solving become a metaphor for the research process. We mirrored the research steps through the clues and puzzles that the students solved to successfully complete the game. Additionally, we tailored the game to include specific sources and tools required for their research.

As with any library instruction session, we needed a solid plan for implementation and an audience. We quickly identified freshmen as the primary audience for this game and decided to use the escape room as an introduction to the resources and tools used by researchers. Since only one member of our team had participated in a commercial escape room, it proved challenging to follow the research process, come up with ideas for content, and to think through the game as a whole. Grappling with the entire process at one time was complex, so we started at the end with the one resource we knew we had: a box that needed to be opened. From there we developed a lesson plan that included learning objectives, a game play map, individual puzzles, detailed clues, and necessary supplies, keeping in mind our constraints of limited class time, limited space, and lack of budget.

We began each escape room session with a short lecture covering how to access and search our library's discovery service, catalog, and Opposing Viewpoints database. Since we knew which types of resources we wanted them to find (book, reference article, and journal article), we reverse engineered a game plan starting with one common element between all of the sources, and then created various puzzles for the students to solve using their newly acquired research skills. The clues leading to the sources were occasionally tricky, and this was where the game became a bit disjointed. To alleviate confusion, we incorporated a help system, referred to as "golden tickets," allowing students get help from a reference librarian and demonstrating that it is okay to ask for help in the research process. In a commercial escape room, doors will often unlock and lead into other rooms where new clues can be provided and the game can be somewhat reset. We did not have this option and had to manufacture reasons for the students to leave the room, such as looking for a book in the stacks. While they were out, we would frantically hide clues before they returned. With each iteration of the game, we smoothed out some of these challenges as we become more familiar with the game and confident with its flow.

From a webinar offered by Green Door Labs (2016), we learned that beta testing is the most important aspect of the game creation process. We could clearly see the importance of preliminary testing after multiple trial runs with library faculty, staff, and student workers. Including other perspectives helped us construct the narrative, identify plot holes, and recognize difficult clues, things we were too close to the game to perceive. This was particularly the case with the red herring clues. We used these not as an attempt to distract the students, but to make them focus clearly on the important content, similar to a researcher determining the information most important to their specific research goals and bypassing what is irrelevant. Reaching the balance of challenging the students to think critically but not leading them too far astray was difficult to achieve. This is the biggest difference between our game design and a commercial escape room. While most commercial escape rooms state they have a 20% success rate, we want 100% of our students to be successful, leaving the experience feeling confident in their research and information literacy skills.

Our initial design utilized many clues that required close reading. The clues were obscured in riddles meant to slow the students down and make them think about what they had learned and what they needed to solve the riddle. However, we quickly found that the students were too excited about getting to the next puzzle to think deeply about what they were reading. Also, some of the riddles were too obscure for someone with only a basic knowledge of information literacy principles.

For our second iteration of the game, we removed most of the textual clues and opted instead for more visual clues. These visual puzzles simplified the game and partially reduced the anxiety of the time constraints. Although they were easier for a beginner to decipher, the puzzles may have been a little too easy. The students struggled to internalize the concepts we were teaching, and the game became only loosely connected to our learning objectives.

The final version of the game is a hybrid of the two earlier games, combining some reading-intensive riddles with more visual puzzles. This has proved an optimal style of game as it is not only fun and engaging, but it is also solidly connected to our learning objectives and is a deliberate mirroring of the research process. Now that the game format is solidified, we have noticed other factors that affect it outside of the mechanics.

#### **LESSONS LEARNED**

While we feel that we have accomplished much in this game, the learning curve has been steep with regard to the design process, and we may never be completely finished adjusting the game as it grows and evolves. Broussard (2014) stresses the need for formative assessment in library educational games. We employed this type of assessment with both our library beta testers and the student participants, enabling us to gain tremendous insight and make significant modifications to the initial versions of our games.

One of the main problems we identified was that sometimes the groups would get caught up on small details. For instance, one version of the game employed a clock clue that used flags of the world instead of numbers. The groups got stuck trying to

identify the German flag, though the flag itself was not important. By simply changing the flag to a more recognizable one (Canada's), the problem resolved easily. Additionally, one of the clues had a small typo (an apostrophe in the wrong place) and a group found it difficult to progress past this point.

Our time and space constraints also added considerable stress to the gameplay. Because we have to operate in one room and because the game works best with two small groups, we noticed that the students became competitive with each other. They were reluctant to give up the golden tickets because it mattered to them that they receive less help than the other group. They would also "cheat" by looking at what the other group was doing and copying them. Additionally, we found ourselves a bit rushed, as we had to both present an abbreviated information literacy session and play through the escape room in a 50-minute class period. The time compression was felt by both the students, who could not be late for their next class or commitment, and the librarians, who worried that the students would not have enough time to complete the experience.

We observed some unexpected and positive outcomes with regard to student engagement. When the students entered the room, they were usually focused on their phones. However, the puzzles and other visual stimuli arranged on the walls around the room caused many of them to immediately look up and take in their surroundings. Their interest was piqued, and they seemed ready and eager to concentrate on the task at hand, as they tried to guess the meaning of the puzzles and clues before the game had even begun. Even those who continued to be captivated by their screens were eventually forced to work with one another when we broke them into teams to begin the game. Even though today's students are connected to each other through social media, they are often not relating to each other in person. Our escape room provided them the opportunity to build relationship bridges and polish their teamwork and interpersonal skills.

As previously mentioned, the room presented some physical challenges, creating the logistical necessity for us to reset certain aspects of the game and re-hide clues while the students were out of the room. While we initially envisioned this as more of a mental exercise for the students, the physical aspects of the game kept them engaged as well. Sending the students out to the stacks got them moving through the building, increasing their comfort in the library space.

When we first began this project, we thought our biggest problem would be a complete lack of budget. However, this was not the case and our experience was similar to Giles (2015) that "a lack of funding was not an obstacle to creating a successful game" (p. 174). We had to build the entire game with available office supplies, surreptitious journeys to the color printer, a scavenged box, and lots of tape. This worked in our favor, especially when we decided to make drastic changes to the game. Now that we have our game concept stabilized, we have plans to spend a little money on supplies, but the total will amount to approximately \$250.

#### ASSESSMENT AND COLLABORATION

We solicited qualitative and quantitative feedback from the students after the completion of the game, ascertaining their feelings about the game and testing their retention of the information literacy concepts. We asked five multiple-choice questions concerning information literacy knowledge; the correct response rate ranged from 65% to 93%. When we asked students what was most difficult about game, many of them vaguely referenced the general difficulty of the clues. However, a few students gave specific feedback about the design and placement of particular game elements, which were easily addressed. The students also provided useful comments about what they would change to improve the room. For example, one student wished to have a separate box for each group to open. Another student indicated that librarians providing some of the clues interrupted the game experience. We are incorporating this feedback and buying some supplies based on it. Additionally, our assessment was not as rigorous as we would like (with a pre-test/post-test and control and variable groups); we plan to address this in future collaborations.

The instructor's perspective was also immensely important. Dr. Duncan provided us with excellent feedback, saying:

The Library Escape Room helped first year students find their bearings and learn the resources and tools integral for their success as students. Perhaps more importantly, it helped them to see how essential and helpful library faculty are, and gave them a chance to build a relationship and stake in the library.

For future collaborations, we have identified a few key partners whom our Education and Outreach team has worked with in the past and whom we knew would appreciate an innovative library session. These include our Upward Bound program, international students in the Intensive English Program, as well peer tutors and peer coaches from the Office of Student Success.

#### CONCLUSION

Based on student and faculty responses, we are happy with the trajectory of the game and look forward to sharing it. The best advice we can give to others, is that flexibility will be the most important aspect of the process. There will be considerable trial and error, so it is important that librarians and collaborators are able to roll with the punches and be up for an adventure, in whatever form that may take. For anyone who is looking to build a successful escape room, take inventory of the partnerships that are currently

working well, and select ones that will work best as far as number of students, adaptability, and personality. Look for existing resources that can be repurposed, and take advantage of the bridges that have already been built, but remember to temper expectations.

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#### **APPENDIX A**

# Library Escape Room

## **OVERVIEW & PURPOSE**

Research is an exciting yet intimidating process. By going through this escape room, you will learn solid research skills in a fun, interactive environment.

## **OBJECTIVES**

Use the library resources to find:

- A book on the shelf
- Background/reference information on a topic
- An article in a database

### MATERIALS NEEDED

- 1. Everything in the room (up to the treasure box) is a potential clue
- 2. The library's website: uca.edu/library

### REWARD

Whatever you find in the box is yours!!

#### **APPENDIX B**

## House Rules

- 1. Each puzzle will only be used once.
- 2. If you are stuck, re-read your clue.
- 3. If you are still stuck, look around the room and at the walls to see if anything can help you.
- 4. If you are really, really stuck, it's okay to ask for help. You have two golden tickets.
- 5. Nothing in the room behind the treasure box is part of the game.
- 6. Please do not dismantle anything. Nothing needs to be taken apart to solve the puzzles.
- 7. When you find a resource, speak with a librarian.
- 8. Your first clue is hidden in an envelope that is not immediately visible in the room.

## Have fun!

#### **APPENDIX C - ASSESSMENT**

- 1) Which of these is a specific database you would use to find a balanced perspective on controversial issues?
  - a) Library Catalog
  - b) OneSearch
  - c) Opposing Viewpoints
  - d) Academic Search Complete
- 2) What are some common mistakes that students make when searching the Library Catalog? (check all that apply)a) Misspelling words
  - b) Starting with a subject term search
  - c) Trying different search terms
  - d) Typing a question into the box
  - e) Starting with a keyword search
- 3) As you are walking through the library, you notice that there are labels on the ends of rows of books. In which row would you find the call number PR6068.B93 2004?
  - a) PR2000-PR2300.05
  - b) PR6068.A5-PR6090
  - c) PR1530-PR1680
  - d) PR6067-PR6068
- 4) Where is the best place to start a general search of the library's resources?
  - a) Opposing Viewpoints
  - b) Google
  - c) OneSearch
  - d) Library Catalog
- 5) Which of the following is not part of a correctly formatted citation?
  - a) Author
  - b) Index
  - c) Year of Publication
  - d) Title

On a scale of 1-5, rate your confidence using library resources after completing the escape room challenge (1 Not confident-5 Very confident).

- What level of success did you and your classmates have working as a team (1 Not Successful-5 Very Successful)?
- What was the most difficult part of completing the escape room?
- What was your favorite part of the escape room?
- Do you think anything needs to be changed to make the escape room better?