

Misinformation Escape Room: Supporting Libraries as Hubs for Misinformation Education

Project Summary | The University of Washington Information School (Principal Investigator: Chris Coward) requests \$248,427 from the *National Leadership Grants for Libraries* program for a Project grant (*Lifelong Learning*) to: (1) finalize development of and evaluate an online and physical escape room that educates people about misinformation, and (2) promote and disseminate the escape room to libraries nationwide. The project also contributes new knowledge around information literacy theory and pedagogy, game appeals and mixed reality games applied in a civic context, and virtual library programming.

Statement of Need | Misinformation has emerged as a foundational threat to democratic society, undermining civic discourse, and tearing the social fabric. Misinformation also represents a frontal challenge to the library profession. Research by Connor Sullivan finds that library efforts to educate people about misinformation are largely based on a limited understanding of how misinformation works and do not fully account for misinformation research in other fields (Sullivan, 2018). Our study of librarians' professional experiences with misinformation further finds that while librarians possess a nuanced understanding of how their patrons are grappling with misinformation, they lack sufficient knowledge to teach about misinformation (Young, J et. al, in press). Interviewed librarians expressed a desire for programs that: (1) appeal to a broader audience, as existing programs mostly attract already concerned citizens and not people who might be more susceptible to misinformation; (2) embed misinformation within topics of community interest, not stand-alone "misinformation" programs; and, (3) are engaging and interactive, going beyond "how to" type tutorials.

In response to these findings, the research team identified an escape room as a potentially effective mechanism for delivering misinformation programming. Escape rooms are live interactive adventure games in which a team of players (e.g. 4-8) work cooperatively to solve puzzles in a set amount of time (e.g. 1 hour). A worldwide phenomenon, they are also popular in public libraries where they have been deployed to offer STEM learning, curriculum support in partnership with schools, and information literacy instruction, in addition to entertainment value (Kroski, 2019).

Project design | The objectives of this project are to finalize development of, evaluate, and scale an escape room (with online and physical versions) that achieves cognitive and affective learning outcomes about misinformation. The project also contributes new knowledge around information literacy theory and pedagogy, game appeals and mixed reality games applied in a civic context, and virtual library programming. As such we expect this project to inform ongoing conversations about public libraries post-Covid.

With startup funding from the UW Technology & Social Change Group and Center for an Informed Public, the research team started work on an online (due to the pandemic) escape room in Spring 2020 with a class of students and the co-founder of *Puzzle Break*, the first US-based escape room and a leading designer of escape rooms nationally. Our work has been informed by field-leading misinformation research from the UW Center for an Informed Public (CIP), research on game appeals and mixed reality games by the UW GAMER Group, and interviews with librarians who have hosted escape rooms. Version 1 is now complete. We applied constructivist learning principles to design a structured environment in a playful context for people to learn and apply knowledge for problem solving. Additionally, like a game, it enables participants to step into a magic circle that provides permission to play towards mastery, and fail safely, an attribute not present in more conventional forms of misinformation education. Our escape room is a fictional theme in which the group has come into possession of a journalist's laptop who was investigating a pharmaceutical company. The company claims to have created a breakthrough drug and is about to go public. Players have 45 minutes to solve 5 puzzles -- involving manipulated content, social media bots, deepfake images and videos, and other forms of misinformation -- and uncover the truth. A librarian hosts the escape room session over Zoom, leading players through the escape room narrative and offering hints when people are stuck. Players interact with each other as they collaboratively solve the puzzles. The session ends with a 15 minute debrief with the librarian. Game literature shows that an opportunity to reflect on an experience and put it into a non-play context is where

most learning happens (Clark et al., 2013). From October 2020 to March 2021 we will pilot test the escape room in 5 demographically diverse libraries to gain initial insights into both operational elements and patron learning outcomes. Initial data should be available in time for the full IMLS proposal, if invited.

Project funding from IMLS will allow us to incorporate learnings from the pilot test into V2 of the online escape room, and develop a physical escape room (a low-cost pop-up), approximating the online version for comparison purposes. The physical version will be useful for library communities with large patron populations without internet connectivity (e.g. rural areas), and to reach populations who prefer in-person engagement. This development will occur in fall 2021.

In winter 2022 we will deploy and evaluate the online and physical rooms in 10 libraries, representing a diversity of geographic and population characteristics. Each library will host 3 online and 3 in-person sessions, for a total of 60 sessions, allowing for within and between library comparisons. Librarian data will consist of semi-structured interviews to learn about the effectiveness of the two rooms and their contributions to library goals, and capture suggestions for improvements. We will also create a cohort of the 10 librarians for group sharing and learning. From the participants, the librarians will conduct pre- and post-session surveys, and document session events (completion times, errors, confusions, negotiations, etc.) that we have mapped to learning outcomes. In winter/spring 2022 we will analyze the data, write up our findings, and produce the final online and physical versions.

In summer 2022 we will conduct a large-scale dissemination campaign in partnership with WebJunction, including an implementation guide, video tutorial, webinar, and other promotional materials. We will also disseminate our research through academic and practitioner journals and other venues.

This proposal assumes there will be a sufficient number of libraries that have reopened by fall 2021. If this is not feasible due to the pandemic we will still evaluate the online version, and expand the number of participating libraries and/or pursue other below mentioned opportunities.

Our team consists of experts in information literacy, mixed reality games, civic media, and escape room design from the University of Washington Information School, Emerson College Engagement Lab, and Puzzle Break. We have received enthusiastic interest from numerous libraries across the country and potential advisory board members.

Diversity Plan | The project is committed to selecting half of the participating libraries from communities with significant rural, minority, or low socioeconomic populations.

National Impact | Misinformation is a national (and global) phenomenon that public libraries are uniquely positioned to address. An escape room, hosted by librarians, offers a novel educational experience that draws on the library's physical, digital, and human assets. The escape room can be continually improved, and new ones created to address new forms of misinformation, add other languages, and appeal to different sociocultural groups. Escape rooms can also be deployed in museums (Seattle's Pacific Science Center has expressed interest) and other cultural institutions. The online room can be instrumented to automatically capture usage data for ongoing research.

Budget summary | We request \$248,427, including \$124,288 for faculty, research scientists, and student salaries and benefits; \$37,500 for consultants, sub-contracts, and library participation stipends; \$6,400 for supplies; \$18,009 for PhD tuition; and \$62,230 for indirect costs (37%).

References

- Clark, D., Tanner-Smith, E. E., Killingsworth, S., & Bellamy, S. (2013). *Digital Games for Learning: A Systematic Review and Meta-Analysis Executive Summary*.
- Sullivan, M. C. (2018). Why librarians can't fight fake news. *Journal of Librarianship and Information Science*
- Young, J., Boyd, B., Yefimova, K., Wedlake, S., Coward, C., & Hapel, R. (In press). The Role of Libraries in Misinformation Programming: A Research Agenda. *Journal of Librarianship and Information Science*