Evidence Based Library and Information Practice

Evidence Summary

Escape Room Game Design Has Teaching Potential for Engaging With Misinformation Behaviors

A Review of:
Cho, Y., Coward, C., Lackner, J., Windleharth, T. W., & Lee, J. H. (2023). The use of an escape room as an immersive learning environment for building resilience to misinformation. *Journal of Librarianship and Information Science, 57*(2), 524-538. https://doi.org/10.1177/09610006231208027

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Received: 27 Aug. 2025 **Accepted:** 30 Sept. 2025

DOI: 10.18438/eblip30874

Abstract

Objective – To evaluate the efficacy of game-based learning as a tool to teach misinformation recognition strategies, with an additional focus on cognitive bias, emotion, and attitudes related to misinformation. The authors also explore librarians' responses to the use of the game as library educational programming to identify strengths and areas of concern in the game design process.

Design – Mixed-methods user study combining participant survey data with inductive and deductive coding of qualitative data extracted from video recordings and open-ended questions.

Setting – Washington State public libraries, primarily city and suburban locations.

Subjects – 80 public library patrons and 6 public librarians in gameplay; 50 patrons additionally completed the optional survey.

Methods – For this exploratory study, authors designed a misinformation escape room game based on interviews with librarians, college student input, and escape room developer collaboration. The authors recruited and trained public librarians to host the game and facilitate follow-up discussions, then recruited 80 participants via communication channels chosen by the public librarians, including newsletters, websites, and social media. The game was run 17 times across six locations. Game participation and discussions were recorded and transcribed. Following the game, participants were asked to complete a survey that included quantitative and qualitative responses, and librarians participated in a focus group after completing all of their game sessions. Researchers then coded the responses with both predefined and emergent codes.

Main Results – Researchers found that participants were exposed to new misinformation techniques during the game, especially deepfake images and videos. Participants stated in the follow-up discussion that the use of misinformation created a sense of vulnerability, and they reflected on their individual responsibility regarding the spread of misinformation, including that once misinformation is shared, it cannot truly be unshared. As a result of the game, many participants highlighted the need for greater caution and critical thinking when engaging with information. Participants appreciated that the game was both fun and cooperative while affirming that it improved their awareness of misinformation techniques.

Conclusion – The combination of immersive experience, collaborative play, and the post-game discussion led to better awareness of modern misinformation techniques and a willingness to reflect on the experience of engaging in misinformation. The post-game debrief is particularly important as it allows participants to form connections between the game and real-world misinformation experiences. Further research could pursue more conclusive evidence regarding patterns in misinformation experiences, or a longitudinal study could explore the game's long-term effects on participants' attitudes and behaviors.

Commentary

Gamified learning has long been studied, spearheaded by Malone's (1980) pioneering work on intrinsic learning motivation in games, with modern research on gaming now having enough data to justify the strategy and posit future initiatives for study (Zainuddin et al., 2020). The authors of this study align their game design with that of Roozenbeek and van der Linden (2019) with the intent to integrate more advanced techniques in order to yield greater educational outcomes. The authors invest a great deal of effort into the intentional development of an educational game through a collaborative effort with librarians, student input, and experienced game designers.

This study was evaluated with the CRisTAL checklist for appraising a user study (n.d.) as well as the EBL Critical Appraisal Checklist (Glynn, 2006). The authors clearly define their focus on evaluating games-based learning and take an effective design approach to test their hypotheses. Their decision to train librarians to run the game while the researchers would only review the results afterwards provides a strong defense against bias, and having the game run at multiple locations with different user populations diversifies the sample outcomes effectively. The combination of possible data points drawn from researcher observation, guided discussion, and independent survey responses could allow for the researchers to evaluate the game's impact from a variety of angles. The researchers report findings that participants were less familiar with deepfake images and videos, and that participants have strong, emotional responses to the spread of misinformation. Additionally, participants connected the gamified learning experience to real-world outcomes, all of which resonates with the trend of gamification-as-education in libraries. These findings could be used to justify the time and labor for other librarians to pursue the creation of a similar game.

While the authors state that this study is exploratory and not generalizable, there are several limitations with the study as it is presented. The authors intentionally chose to omit the frequency at which participant statements corresponded to their codebook. They also elected to omit their quantitative data, citing that the survey sample (50 participants) was too small to analyze for statistical significance. This results in the entirety of the authors' discussion being supported only by hand-selected excerpts from individual participants' statements, which often substantiate their original ideas and hypotheses. The selected excerpts also have no identifying details to distinguish if each excerpt came from a single participant or a single play session. As readers cannot compare these excerpts to any other data, it is impossible to evaluate whether the selected excerpts are effective representations of the game experience.

Furthermore, readers will be unable to recreate this study in a significantly comparable way. The authors do not provide specific information in this article or a link therein about their escape room design or librarian training, factors which would drastically alter the outcomes if implemented differently. Additionally, the authors' omission of their quantitative survey design and subsequent data forgoes the opportunity to reuse the survey questions as a means of comparison.

While this work participates in a continually relevant library trend, its methodology may be insufficient to support replication or broader application. The authors posit several ideas that are generally sustained by both their findings and the wider body of literature on gamification, but the lack of quantitative data, qualitative coding data, survey questions, and instructional materials for the game prove to be an obstacle for researchers looking to extend the research as suggested by the authors. However, librarians may still take inspiration from the structure of the research project as well as the authors' success at recruiting participants and deploying the game at multiple locations, as it shows great potential for possible research and instruction collaborations between universities and local libraries.

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