

1. INTRODUCTION

The University of Washington Information School (PI: Jason Yip) requests \$326,495 for a two year research project that addresses the need of supporting youth (ages 10 - 15) in gaining knowledge and practice in a safe environment, focused on **digital civic engagement (DCE)**. The intended impact aims to enhance understanding and support of youth's DCE needs in cultural heritage institutions by employing co-design methodologies with librarians and youth, creating a flexible tabletop role playing game (TTRPG) for open inquiry in democratic digital learning in libraries. Our research project is appropriate for **Goal 1 and Objective 1.1**. Specifically, our research project focuses on providing replicable library programs and activities to support the creation of informal learning to support youth in DCE. We will also develop a curriculum, supported by a rulebook of game instructions, to help librarians develop their own stories around DCE for their youth patrons. **Research questions:** The following research questions guide this project: **(RQ1):** How do TTRPGs support DCE with librarians and youth?; **(RQ2):** How can socioemotional learning play a role in DCE through tabletop gaming in libraries?; and **(RQ3):** What does the co-design experience teach us about children's DCE and youth engagement? This project extends findings from a Fall 2023 pilot study indicating the importance of storytelling, flexible activities, and creativity in supporting DCE (see [Appendix B](#)).

What is the relevance of your proposed research for current practice? Civic engagement is the "individual or collective actions in which people participate to improve the well-being of communities or society in general" [3]. Despite the proliferation of digital technologies (e.g., social media, AI), youth participation in traditional civic engagement has been in decline. Research demonstrates young people are transitioning towards new, digital mediated forms of civic engagement that are difficult to follow [3]. A need for early education exists [3], but there is a lack of meaningful activities for children to build passion and predispositions for becoming active digitally civically engaged citizens. Jenkins et al. [10] calls for support for the new "participatory culture", that is, the need for lower barriers, informal mentorship, and social connections around civic engagement, especially coming from libraries. Our conjecture is that libraries can provide these safe spaces to create meaningful engagement for children through programmatic design [3]. **Our proposal fills this critical gap by developing a play-based narrative tabletop roleplaying game (TTRPG) for youth (ages 10 - 15) that libraries can utilize with their communities around digital civic engagement (DCE).** DCE in youth refers to the digital interactions of both traditional aspects of civic engagement, but also forms of new media literacies (e.g., development of digital identities, expressing themselves through memes and short-form videos, using generative AI) [3].

A [tabletop roleplaying game \(TTRPG\)](#) is a collaborative storytelling adventure played with friends around a table, either in real life or online. One person acts as a main narrator and guides the story, presenting scenarios and outcomes, while others act as role-players, deciding what their characters do in the narrative. Each TTRPG has its own rules outlined in guides like a rulebook, along with suggested storylines, but the game style allows for flexible storytelling and facilitates socioemotional learning [20]. With the rules, players can develop their own stories, meaning the game can be led by a librarian or empower youth to design their adventures. We argue TTRPGs can support librarians and youth in DCE development in three ways. **(1) Mechanics:** TTRPGs offer customization for specific settings and learning objectives, facilitating the integration of DCE-specific mechanics and core gameplay. TTRPGs can also enable systematic exploration of DCE concepts while providing opportunities for customized character creation and collaborative storytelling [2]. Players can safely explore various decision-making processes within the game, fostering a shared narrative experience where everyone contributes to story development. **(2) Socioemotional connections:** Socioemotional learning (SEL) is a key factor in understanding DCE. TTRPGs facilitate socioemotional learning through facilitator guidance, navigating interpersonal conflicts, fostering reflection, and utilizing sandbox game designs for safe experimentation [20]. TTRPGs offer a controlled environment where facilitators can adjust the story and mediate disputes, ensuring dynamic engagement for youth. **(3) Diversity, equity, and inclusion opportunities:** TTRPGs promote diversity through inclusive storytelling, representation, and the creation of

safe spaces within the gaming community. Despite a history of white, male-dominated player bases, the growing inclusivity of the gaming community has welcomed more female, LGBTQ+, and other underrepresented players. Recent games like [Sina Una](#), [Coyote and Crow](#), and [Into the Motherlands](#), along with initiatives like [Asians Represent!](#) and [DesiQuest](#), highlight diverse cultural influences and creators. Tools like [the Session Zero System](#) and [Consent in Gaming](#) materials aim to make TTRPGs more accessible and welcoming for all players. Overall, this research project seeks to examine how these features of TTRPGs can support youth's socioemotional learning needs around technology and engagement.

Imagine the following TTRPG scenario (Please see [Appendix C](#) for more examples): *Several local youth at the Snoqualmie Public Library are working their way through the first module of Digital Disobedience, a tabletop narrative roleplaying game, where players are all young sleuths trying to figure out the digital mysteries and eccentricities of a strange isolated town. One of the mysteries is figuring out what to do with the fake rumors online about the dangers of the local skate park. One player, Angela suspects that her friend John is playing as an online troll using generative AI to create fake videos about how teenagers are harassing older adults at the park. Teen librarian Eliza checks the Facilitator's Guide. "Hmm, I wonder what skills you have that could help you figure this out...? Check your character sheets and see what special abilities your character has."*

"Oh, I can roll to show that the posts are not trustworthy." Carla says, reading her skills sheet. "And I'll use my ability as an Instagram influencer to give you a bonus to that roll," Angela chimes in, pointing out her special character ability on social media. Carla rolls and gets an outstanding success! The team is able to find a way to have good engagement about how best to refute baseless rumors online caused by John the troll. As the youth continue to play in this narrative game, Eliza the librarian helps to connect the narrative gameplay with how youth are a part of the sociotechnical ecosystem. They talk about what is difficult in real life digitally, but also what kinds of socioemotional learning skills could support them. After the session, the youth start thinking about actions they can take in their own communities. Angela considers how her use of Instagram and generative AI tools could be used in digital collaborative efforts to build resilience and support against harassing jokes among youth in her community.

This short snippet is an imagined example of how TTRPGs can allow youth to act (positively, negatively, and neutrally) via storytelling, and how youth can consider their own technological skills and socioemotional learning in relation to connected learning. While IMLS-funded work has been done supporting connected learning [24], less is known about the role in which libraries work with youth to think about DCE for their future. Imaginative play, like TTRPGs, can open up a number of potentials that allow youth to experience difficult situations and experiment with risky decision making in a safe environment [6]. Through our established co-design and games design process [13], we specifically will focus on youth (ages 10 - 15) navigating complex societal issues around DCE. We are proposing to co-create a narrative TTRPG game that allows youth to safely experiment and learn about DCE with librarians.

2. PROJECT JUSTIFICATION

Needs 1: Children, librarians, and digital civic engagement. Children today are growing up with social media, generative AI, online gaming, and online mis/dis information. As a result, they need to learn both how new technologies function and how to interact with them. Take, for example, generative AI (GenAI) and youth. The newest versions of GenAI (e.g., ChatGPT, Dall-E, Stable Diffusion, Bard) have only recently been available to children and families (November 2022). Youth now have to learn how to use GenAI, while also needing guidance on its potential and pitfalls. This trend of drastic technological shifts corresponds to the need for youth to become more aware of DCE. Evidence suggests that DCE in youth is often more equitable and widespread than traditional forms of civic engagement [3]. DCE is important for youth in the age of GenAI and misinformation because 1) education is needed to lay the groundwork for young individuals to become active participants in civic life; 2) children's connection to DCE is associated with their self-esteem and well-

being; and 3) technology is moving rapidly, but the skills and interactions around DCE can still be engaged with [3].

While studies on youth and DCE exist [4], there is a dearth of knowledge on how librarians can proactively engage youth in DCE. Researchers have developed many conceptual frameworks for thinking about and evaluating DCE in youth [18, 30]; however, actual figures on age, habits, platforms, demographics of participation, and content are limited [3]. The rapid evolution of digital media and its usage among youth makes it impossible to make generalized assumptions about patterns of usage and platforms influences on DCE, leading to a need for tools and activities that also adapt to these factors. This project makes use of games that are intentionally designed to be flexible and modular, particularly as librarians often play the role of media mentors for various types of communities [1].

Needs 2: Digital literacy, socioemotional learning, and youth engagement. From an educational point of view, we find a lack of effective approaches for helping youth become better involved in DCE. Formal civic education exists in some schools [30] and can support youth's positive association with interest in political and social issues. Yet, digital technologies now play a stronger role in civic education. The same digital tools used in social and political activism are the tools used in cyberbullying, harassment, misinformation, and data surveillance. Overall, digital youth still need adult guidance and learning opportunities for DCE. Similarly, UNICEF [3] notes the potential to overemphasize and highlight one area as cases of the entire population, when in fact so much of DCE in youth is strictly dependent on context. One learning area in DCE ripe for opportunity is socioemotional learning [9]. Socioemotional learning (SEL) refers to the overarching concepts and theories that encompasses youth's acquisition and application of appropriate interpersonal, intrapersonal, and decision-making skills (e.g., resilience, self-regulation, empathy, self-efficacy) [11]. Development of SEL in youth has shown potential for helping them promote more positive technology usage [9]. Yet, we lack insight into the links between socioemotional learning and digital literacies, as well as a systematic approach to evaluating DCE with youth with SEL in mind. We argue combining SEL and scaffolding around participation in DCE can be powerful, particularly in library settings where adults and youth collaborate informally. However, deeper research needs to take place in these areas.

Needs 3: Libraries, families, and digital civic engagement. Libraries are critical places for children to learn about democratic education and DCE. Previous projects focused on libraries have addressed the issues of DCE in youth (e.g., ConnectedLib [24]), but there remains a gap in our understanding of the specific roles libraries play in DCE. We believe libraries offer safe spaces for meaningful youth engagement via program design and game-based learning, despite this, there is still a question as to how library programming needs to be adaptable to new technological innovations while evaluating children's DCE engagements.

Needs 4: Games and play-based learning opportunities. Games and play are an essential aspect of learning, both for developing socioemotional skills and engaging with peers in problem solving and conceptual development [26]. Currently the [Library of Congress has a civic games section](#), which supports youth DCE. However, these designs in the Library of Congress remain as static games for specific contexts and less about the role of digital technologies in civics. There is a need to build designs flexible for any kind of new technology and interaction, while remaining systematic in how youth engage in learning about DCE.

Needs 5: Co-designing as a process towards designing for democracy learning and education. Co-design, rooted in a practice of democratizing the design process, is powerful due to the insights it uncovers from youth and library partners [12]. This type of design work empowers youth and encourages them to make decisions in the design of technologies and other artifacts. Encouraging agency and active participation among youth is also crucial for DCE. In order to explore the potential of co-design for DCE, in Year 0 of the project, we spent four weeks working with children, youth, graduate students, and librarians on their ideas around DCE (see **Research Plan** and [Appendix B: Pilot Studies](#)). We learned that TTRPGs could provide the necessary gameplay mechanics to encompass the numerous scenario ideas that children generated.

Target groups: We will work with the following groups: *Librarians:* We will work with youth and teen librarians, particularly in underserved communities, such as lower-SES communities in The Seattle Public Library and lower-resourced WA rural libraries. *Teens:* We will have teen leaders (ages 16 - 17) work with librarians to facilitate the co-design sessions. We anticipate 10 - 20 teens to be involved in total. *Youth co-design partners:* Based on prior work, each library site will have 10 - 12 youth (ages 10 - 15). These youth will be the design partners who will co-design the activities. We anticipate 30 - 40 youth total in this project. *MLIS students:* The UW iSchool will support this project with MLIS students who will work with children to co-design. Based on prior enrollments of PI Yip's participatory design and libraries course, we anticipate 20 - 25 per cohort, with a total of 40 - 50 MLIS students total. **Beneficiaries:** The following are the beneficiaries of our research. *Youth:* By developing a tabletop roleplaying game for DCE for youth, we seek to create ways in which youth can work together to understand and better involve children in technological interactions for the betterment of democratic learning. *Public librarians and educators:* Librarians and educators will be able to use our materials to 1) work with children on the topic of DCE; and 2) develop their own lessons and activities around our materials. *Researchers:* We seek to advance our knowledge on youth, misinformation, and digital literacy with researchers in the field of child-computer interaction, learning sciences, and library and information science. *Designers:* We will provide insights on designing play-based activities for DCE.

How does the proposed project differ from, complement, or build upon existing knowledge? There are few empirical studies on the benefits of TTRPGs, despite a significant amount of anecdotal evidence. TTRPGs are more flexible and updatable than traditional board, card, video games, and allow youth and librarians to make stories and lasting memories together. This project looks at the role of libraries as both centers of DCE and gaming innovation. It also focuses on learning about technology and civic engagement within an active, collaborative environment that draws on work in educational gaming and peer-to-peer learning [25]. This type of activity allows youth to develop agency and make decisions in a safe space. It also builds on existing library TTRPG groups and other youth / teen engagement efforts to add a layer of DCE education that is much needed. The proposed project draws on the team and collaborators' expertise in games, design, DCE, and libraries. Many educational games lack strong game design principles and result in games that are not as engaging. Between the expertise and the rigorous design and testing process, this project will build on existing DCE educational efforts and combine them with innovations in the use of collaborative gaming for education.

3. PROJECT WORK PLAN

The following are the goals of this research project: **Goal 1:** Knowledge of children, librarians, and DCE: We seek to understand children's experiences, perceptions, and strategies around DCE, as well as what support librarians need to help children engage with digital civics. **Goal 2:** Product development and research evaluation: Building upon our exploratory work, we aim to develop a scalable online co-design curriculum for librarians to augment their own experiences, technologies, and contexts into a TTRPG. This will include gameplay guides, story development guides, and a series of stories to play through. Based on these designers, we will be conducting research evaluations and outcomes of socioemotional learning in DCE through gameplay in libraries. **Goal 3:** Co-design process: We will document the co-design process of the design of the game guides and stories used to create the TTRPG. Our goal is to research how co-design processes complement the issues of DCE and new technologies learning with youth. **Goal 4:** Dissemination of knowledge and products: Finally, we will create a hub for accessing all project resources and undertake a nationwide dissemination campaign with the aim of facilitating broad uptake among libraries.

Description of current work: Below is the current foundational research work of this project:

KidsTeam UW and Libraries: From 2015 to present, PI Yip has developed a robust on-campus and online intergenerational co-design group between SPL and children co-designers (ages 10 - 15), called

KidsTeam UW. We have engaged in over 500+ co-design sessions and have created a number of digital learning activities for youth and families at SPL, industry partners (e.g., Amazon, Duolingo, WGBH), and academic institutions. We have conducted KidsTeam UW for two years successfully online (2020, 2021), and three years in a hybrid format (2022, 2023, 2024) [13]. From 2017 - 2024, we developed co-design library partners in Seattle and rural Washington. KidsTeam Libraries is a dedicated co-design program to support library partners in the co-design of digital learning activities in neighborhood library branches. While COVID-19 and internet infrastructure posed challenges, we were able to successfully create two co-design teams with the librarians and UW students. We also developed a teen co-design leadership program [21] in which teens learn about co-design and serve as lead facilitators. We have worked with over 20 teens to act as facilitators in co-design with children in libraries.

Center for an Informed Public (CIP): The CIP is a field-leading center for research on mis- and disinformation and translation into policy, technology design, curriculum development, and public engagement. The CIP is the only Knight-funded center with a commitment to libraries and democratic engagement and learning. Co-PI Coward is a co-founder of CIP, Co-PI Lee is a faculty affiliate, and the Center has numerous other faculty, research scientists and students contributing to the library and other projects. Coward undertook foundational work on libraries and civic engagement prior to the establishment of CIP [5]. Through the CIP, we hope to extend our prior work beyond misinformation towards digital civic engagement with librarians and youth.

GAMER Group and game designs: The GAMER Group explores new ideas and approaches for organizing and providing access to video games and interactive media, understanding user behavior related to video games, and using video games for informal learning in venues such as libraries and museums. Our team has the expertise at designing games for learning experiences. Our work includes: (1) *TILTED*, an card-based game for eSports players to help talk about their mental health and how best to reduce anger and stress during gameplay (e.g., tilt) [28]; (2) *The Euphorigen Investigation*, which aims to provide opportunities for players to experience how it is like to accidentally fall for misinformation and reflect on their real-life information search/processing behaviors on social media to help them become cautious but engaged digital citizens; and (3) *Starbound Secrets*, a Minecraft maze for children (ages 8 - 13) which simulates the misinformation rabbit hole effect. Participants go through a narrative about an alien species in space and need to make decisions about how to engage with them based on the information collected. See [Appendix E](#) for more information.

4. RESEARCH PLAN

Building on prior efforts: Our prior work on digital play-based misinformation activities (e.g., Escape Room, Minecraft Misinformation Maze, playing with AI, and misinformation videos) has taught us 1) how to co-design with youth and libraries on misinformation; 2) what needs librarians, teens, and children have around misinformation; and 3) how play-based activities can support new digital literacies for youth. **New knowledge:** We view digital civic engagement as a form of identity development, socioemotional learning, youth engagement, and preparation for new learning. It acknowledges the role of new technologies and a complex information ecosystem where DCE is increasingly being challenged by misinformation, GenAI and other techniques. We seek to provide new and improved librarian practices around DCE and tools to librarians for engaging with youth on DCE, especially given the rapid pace of technology. We are interested in the integration of socioemotional learning theories through TTRPG [20] to support DCE in youth with librarians.

Specific research activities and sequence: Our process for designing new play-based activities will employ teens (ages 16-17) as leaders of intergenerational co-design teams with youth (ages 10-15), librarians, and MLIS students [12, 21]. Our prior work in developing intergenerational co-design groups of children, teens, and librarians has proven effective for developing new digital curricula around misinformation [17], creating relational bonds between librarians and communities [12], and allowing teens to innovate in design

[21]. By having **teens lead co-design groups of children as near-peer leaders**, we can better identify types of digital civic issues that children are passionate about and their transition towards adolescence. Figure 1 outlines our two year process for this project.

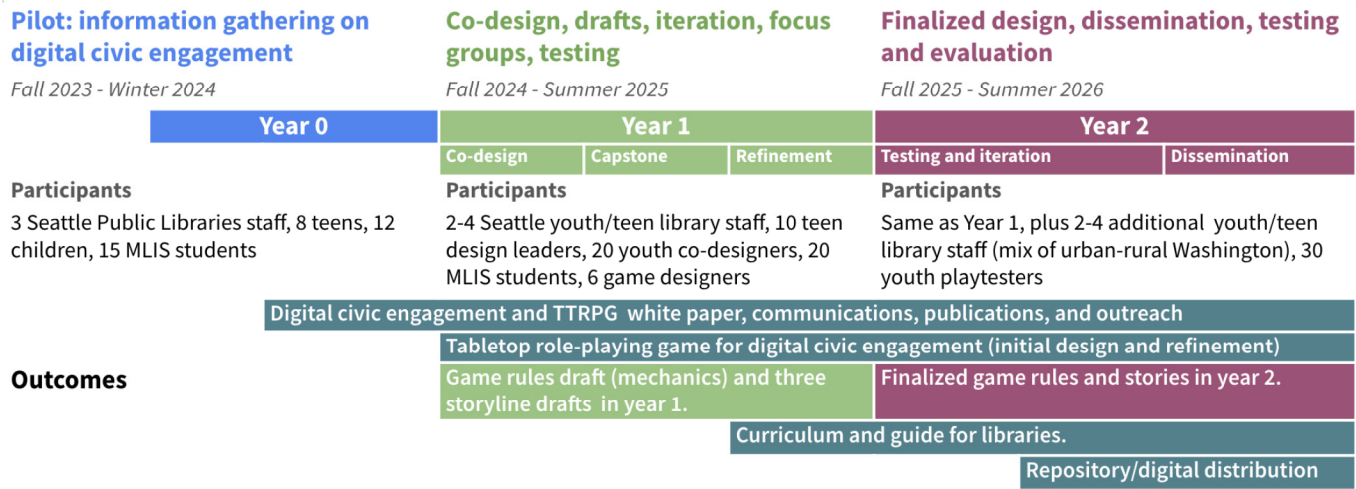


Figure 1. Timeline for our two year process.

Year 0: Pilot (Fall 2023 - Summer 2024). During Fall 2023 we worked with KidsTeam Libraries in the Seattle Public Library and MLIS students at the University of Washington to explore DCE in co-design for libraries. **Process:** We conducted four co-design sessions with MLIS students, teens, librarians, and children on DCE. The KidsTeam Libraries group designed around four questions: 1) How do children perceive community spaces?; 2) How can children use public service announcements to let people know what they think is important; 3) How do children supply meaning to images without additional context?; and 4) How do children develop community guidelines for online communities? Please see [Appendix B: Pilot Studies](#). **Outcomes:** Based on our sessions we learned that: 1) DCE is multifaceted and takes numerous forms; 2) storytelling and creating allow children reflect on their own civic identities and experiences; and 3) a game that considers the facets of DCE requires both the flexibility to integrate multiple scenarios, situations, and contexts, and a structural frame that allows for systematic evaluation and presentation. Using these initial designs, we built initial prototype scenarios and modules for Year 1. See [Appendix C: Sample TTRPG narrative scenarios \(in physical and online formats\) with prototype images and annotations](#).

Data collection, methods, analysis, and outcomes for Years 1 and 2. Table 1 outlines our extensive plan for answering our research questions in Years 1 and 2. Please refer to [Appendix D - Data Collection](#) for more specific information on data collection and analysis plan.

Table 1. Summary of data collection plans for Years 1 and 2.

Questions	Research Methods	Data Analysis	Outcomes
(RQ1): How do TTRPGs support DCE with librarians and children youth?	Co-design with librarians, teens, and youth (Years 1, 2); Interviews with librarians, teens, and youth (Years 1, 2); Focus groups with game designers (Year 1); Observations of design sessions, user testing, and gameplay (Years 1, 2); Analytics of online game metrics and user tests (Year 2); and Evaluation: Focus groups, surveys, and usability	Mixed inductive / deductive thematic analysis approach using digital civic engagements framework. Analysis includes analytic memos of recordings, consensus coding process, mixed inductive/deductive axial coding approach; and Quantitative analysis and triangulation of log files and analytics of online games, as well as survey measures as appropriate.	Exploration of the intersection of tabletop games and digital civic engagement; Understanding of the needs of youth and librarians in regards to DCE; Development and iteration of the game and educational materials, as well as broader recommendations for librarians and educators.

	testing with youth and librarians (Years 1, 2).		
(RQ2): How can socioemotional learning play a role in DCE through tabletop gaming in libraries?	Co-design with librarians, teens, and youth (Years 1, 2); Interviews with librarians, teens, and youth (Years 1, 2); Observations of design sessions, user testing, and gameplay (Years 1, 2); and Evaluation : Focus groups, usability testing, surveys, and learning analytics (Year 2).	Mixed inductive / deductive thematic analysis approach using socioemotional learning framework. Analysis includes analytic memos of recordings, consensus coding process, mixed inductive / deductive axial coding approach; and Quantitative analysis of learning analytics and applicable survey results.	Understanding of the connections between SEL and DCE, as well as how they intersect in gaming; Recommendations for librarians, educators, designers, and families to support DCE and SEL with TTRPGs.
(RQ3): What does the co-design experience teach us about children's DCE and youth engagement?	Co-design with librarians, teens, and youth (Years 1, 2); Interviews with librarians, teens, and youth (Years 1, 2); and Observations of design sessions, user testing, and gameplay (Years 1, 2)	Mixed inductive / deductive thematic analysis approach using digital civic engagement frameworks and prior work in youth co-design. Analysis includes analytic memos of recordings, consensus coding process of memos and transcripts, and mixed inductive / deductive axial coding approach.	Understanding of how youth-driven approaches to design and DCE can impact engagement and agency. Guidance for designers and educators who wish to incorporate co-design into their materials.

Year 1: Design (Fall 2024 - Summer 2025). Year 1 will be a teen- and librarian-led effort using intergenerational design groups at SPL and refinement. The **Process** for Year 1 is:

- **(1) Determining game systems and base mechanics:** TTRPG systems have specific goals and values built into their mechanics and rules. We plan to draw on existing systems that can align with DCE. This allows us to develop our own mechanics specific for digital literacies and DCE. We will be developing two versions of the game. The first is the **offline version** that will include handbooks, guides, and printouts. This allows for cost effective PDF guides, pencils, paper, and a few dice. The second design will be the **online version** so that others can play without geographic limitations. We will import the mechanics from the offline version to a [game hosting platform](#) and play via Internet browsers. Both offline and online versions will have player guides, facilitator guides, scenarios / stories, tools for developing custom scenarios / stories, and a materials list. Year 1 will focus mostly on the offline design, while starting to plan out the online version for Year 2. We are experts at designing both online / offline versions of games that maximizes the benefit of each play mode with varied mechanics, not simply replicating one mode of the play in the other (See [Appendix E](#)). We will also engage TTRPG game designers in an expert focus group to provide critical insights and feedback.
- **(2) Library co-design:** Once decisions have been made about the mechanics, we will co-design in libraries to ideate and prototype the game. Such topical areas include: what DCE topics are engaging to youth, what do youth want to be able to do in these games, and what potential storylines can be developed. We will utilize co-design methods [27] and observational methods [15] to gather data.
- **(3) Capstone alpha design and initial testing.** As part of the MLIS capstone, a master's student will help design and test an initial prototype of the TTRPG scenarios created in this project. We will be using focus group methods [19] and co-design methods [27].
- **(4) Refinement over the summer.** We will conduct further testing with focus groups [19] and usability testing groups in libraries [16] for our offline version, and partially the online version.

Outcomes: In Year 1 we will: (1) run 12 - 20 co-design sessions across two Seattle libraries; (2) produce multiple early draft designs; (3) conduct pilot tests of multiple designs with around 30 children and teens in Seattle branches; (4) conduct focus groups with game designers for feedback on game elements, (5) refine the main design for Year 2 testing; and (6) generate insights for refining the co-designed curriculum.

Year 2: Testing (Fall 2025 - Spring 2026). Year 2 will focus on finalizing the design of the core single game and running the research evaluations in libraries on the design. The **Process** for Year 2 testing is:

- **(1) Library co-design:** In Year 2 we will continue to use our partnership with the UW iSchool MLIS program to have graduate students act as facilitators in the participatory design and libraries course taught by PI Yip. We will be using co-design methods [21] and observation methods [15] to assess designs. This part of co-design focuses on testing and refining our design.
- **(2) Capstone beta design and testing:** We will recruit librarians, youth, and teens and test out the single game (online / offline versions) in different library contexts (rural / urban / suburban). As part of an MLIS capstone, master's students will lead one of these tests. We will be running usability tests [15], specifically at the online version of the design. With the online version in place, we will also be able to use gaming and learning analytics [22] to assess the design.
- **(3) Research evaluation and final designs.** We will attempt to use Slovak et al.'s [18] design for emotional regulation framework to examine how youth and teens make sense of the TTRPG, DCE, and socioemotional learning. The emotional regulation framework focuses on design in four parts: didactic (how the TTRPG delivers information to youth); experiential (how the TTRPG can guide youth through an experience); offline (how people learn from the TTRPG out of context); and on-the-spot (how people engage in-the-moment in emotional situations). Slovak et al.'s [18] framework allows us to understand the opportunities and challenges of the TTRPG in supporting youth in diverse contexts and technologies with DCE. We will interview youth before and after their gameplay to assess the presence of these four socioemotional elements.

Outcomes. Testing: In Year 2 (9 months) we will: (1) run 16 co-design sessions across 2 libraries; (2) produce a finalized version of the TTRPG for both online and in-person play; (3) test and evaluate these designs in two to three sites (a mix of urban / rural / suburban); (4) refine and finalize the co-designed curriculum.

Year 2: Dissemination (Summer 2026). In the final three months of the project, we will (1) distribute the game, game resources, and curriculum, along with our research findings and (2) implement a plan for long-term hosting of the digital products. The **Process** for Year 2 distribution is:

- **(1) Communications Team:** In Summer 2026 we will work with our communications team to (1) package the activities (online virtual tabletop and in-person tabletop) and curriculum, (2) produce accompanying training resources; (3) create an online hub on [Loki's Loop](#) for accessing all resources; and (4) develop a communications strategy with [WebJunction](#) for reaching libraries nationwide, including a communications kit with video clips of different lengths for distribution via social media, infographics, and other visually appealing artifacts.
- **(2) WebJunction's** expertise and extensive reach will allow us to disseminate our work through articles in Crossroads articles, Webinars, workshops at PLA Conference, and promotion through social media channels. One critical component of the resources will be discussion guides for each activity. The opportunity to reflect on a game and consider its real life implications is when most learning happens.
- **(3) White paper report and research publications:** We will create a white paper report and dissemination of the co-design process. The white paper will also help guide librarians about DCE. We will also submit publications for peer review (see Planning, Execution and Management of the Project). Finally, we will promote our work through different channels, such as the Center for the Informed Public, Young Adult Library Services Association, and American Library Association. We plan on traveling to conferences in Year 2 to present our research study.

Outcomes. By the end of Year 2 (3 months) we will: (1) package the final set of a single TTRPG ruleset for DCE (both offline and online versions) and accompanying resources (stories, guides); (2) develop a hub for accessing the resources and contributing new ones; (3) conduct an extensive dissemination strategy; and (4) broadly disseminate a whitepaper report on our process and outcomes.

Planning, execution, and management of the project.

Project staff: Dr. Jason Yip is the PI of the project. He will teach the participatory design and libraries course associated with this project, manage the co-design sessions, and support the design, research, and dissemination of the digital play activities. Co-PIs Dr. Jin Ha Lee and Chris Coward will lead efforts in the co-design and the national dissemination of the digital play-based activities. Doctoral student Michele Newman will help implement the project. Postdoctoral fellow Dr. Caroline Pitt will support the design and development of the digital and in-person table top game elements in Years 1 - 2. Juan Rubio, the digital program manager at The Seattle Public Library will support coordination of librarians. **Advisory board:** A set of experts will provide advice and support for this project: Dr. Jevin West (University of Washington, misinformation researcher), Cindy Aden (University of Washington, rural libraries adviser), Dr. Jen Rubin (foundry10, digital youth adviser), Dr. Michael Preston (Joan Ganz Cooney Center, digital youth adviser), Dr. Evan Torner (University of Cincinnati, tabletop games and youth expert), and Dr. Emily Friedman (Auburn University, tabletop games and new media expert).

Requirement of IRB approval: This project will require IRB approval. Based on our prior work from 2015 - present, we have an IRB that already covers our work with children, teens, and librarians in co-design. This project can immediately begin, with several modifications we will put into our current IRB to update our research. **Reporting and disseminating findings:** We plan on creating a white paper report on the process of how librarians can create their own TTRPG modules for DCE and youth. We will also be publishing our research findings in ACM journals (e.g., *Computer Human Interaction*, *Interaction Design and Children*), learning sciences and information sciences journals (*JASIST*, *ASIST*, *Information and Learning Sciences*).

5. DIVERSITY PLAN

Inclusion of diversity of perspectives. This project is committed to selecting half of the participating libraries and youth from communities with significant historically marginalized, or lower-socioeconomic (SES) populations. All of the libraries we have worked with in the past were recruited because they all had trustworthy access to diverse youth. Our team has worked in a number of libraries, including The Seattle Public Library (urban), Whitman County Library (WA, rural), and Stevens County Library (WA, rural). These libraries have provided access to youth and families from all walks of life (e.g., gender, ethnicity, immigration, age, family SES, political spectrum, etc.). Our **Project Staff** includes experts in digital youth, digital literacy, gaming, library and information science, and child-computer interaction. Our **Advisory Board** has expertise in urban / rural libraries, digital youth, tabletop gaming, families and children, and misinformation.

To include a diversity of perspectives, we will employ co-design techniques and that will be carefully selected [27]. First, we will utilize Cooperative Inquiry, a framing of adults and children as design partners seeking to build relationships, co-facilitate, design together, and idea together [27]. With equality and equity for co-design in-mind, we will provide various ways for participants to input their feedback, regardless of their backgrounds and literacy levels [7]. For instance, PI Yip developed a co-design techniques framework [27] that takes into account diverse literacies, non-technology resources, and multiple modalities (e.g., drawing, writing, building, acting, etc). Our co-design process has successfully generated many ways in libraries and children's perspectives can be integrated well into design. Our process focuses on teens participation and leadership as a catalyst for defining the challenges and opportunities of our designs [21].

How will the project demonstrate commitment to DEI? As mentioned before, the culture and structure of TTRPG allows for diversity of stories, inclusion of multiple perspectives, and equity of the players. In addition, DCE is a topic that has little information about how BIPOC people, immigrant youth, rural youth, and other marginalized youth are affected. We know children need better DCE learning opportunities, however, we do not know how diversity plays a role in all this. By being able to create digital projects that have been co-designed with many different perspectives, we will be able to implement strategies that take into account the nuances of diversity, equity, and inclusion for DCE.

5. PROJECT RESULTS

Result 1: The first result will be the information dissemination around the socioemotional supports that can be used and developed around the topic of DCE, children, and libraries. **Knowledge advancement:** We plan to develop a similar white paper to UNICEF [3] and Pitt et al. [20] around the topic of DCE, socioemotional learning, and TTRPG. This report will be all the lessons learned about DCE throughout Years 0, 1, and 2 of the project. **Benefits to society:** We recognize the difficulty of curating information about DCE for youth due to the speed of new technology interactions, especially generalized lessons for all contexts. For this reason, we seek to develop deeper case studies that take into account technology, contexts, and a systematic approach to reporting and evaluating DCE. Through this national project, our white paper can be useful for policy makers, researchers, designers, and educators on DCE.

Result 2: The second result will be designs we will create the TTRPG game centered on DCE and socioemotional learning, and the accompanying resources for youth and libraries. **Knowledge advancement:** We will provide the following designs: single core game design and mechanics, modality (local and online design), game dissemination materials (guides/rulebooks for the game, sample character sheets, stories, and design guidelines). **Benefits to society:** A collection of digital resources that have been carefully co-designed by children, teens, researchers, designers, librarians will be able to fill a gap to support educators' need for high-quality resources on digital media literacy strategies to support DCE.

Result 3: We will create a co-designed curriculum and process that allows librarians to create their own DCE explorations and activities. **Knowledge advancement:** Based on prior funding, we will be able to incorporate findings from 2017 - 2024 on co-design with libraries and misinformation to develop a deeper understanding of how co-designed activities can support socioemotional learning that can take place around DCE with tabletop RPG in libraries. **Benefits to society:** We seek to create co-design models (e.g., hybrid workshops (local / online), communities of librarians) and ways to support youth communities to get involved in supporting librarians' design to support librarians to run their own future online co-design teams.

Ensuring project deliverables are readily adaptable, generalizable, usable, and sustainable. The TTRPG, by design, allows for multiple scenarios and adaptability. This makes the game "future proof" as new technologies inevitably arise, and the TTRPG can evolve with changes in the information ecosystem and DCE. Librarians and educators can pick and choose what digital activities work best and supplement these activities with their own lessons and activities. Through a combination of online and local versions, the materials will be accessible to a wide range of individuals and playable no matter the technological capabilities of the library. In our 2017 - 2024 work, we have put together a compilation for downloads of our co-design processes and our misinformation designs. We plan to add TTRPGs and DCE as part of our designs for democracy learning with libraries. Please see [Appendix C: Sample TTRPG Narrative Scenarios](#). We are also creating webinars, videos, and other support materials to help librarians integrate these activities into their communities.

Sustainability of project beyond conclusion of the period of performance. After the project period is complete, we will still be distributing the materials, white paper, and guidelines through channels at the UW. The [UW CIP](#) will be supporting these materials beyond the project period. This project will also be the foundation for the creation of new research. The creation of these materials is the start of a larger repository that the [UW Digital Youth Lab](#) can study to better understand what makes effective digital tools for DCE for children and how best to integrate them into educational settings. PI Yip is also a senior research fellow at the [Joan Ganz Cooney Center at Sesame Workshop](#) and will work closely with Dr. Michael Preston (adviser) on how these designs can be utilized in family-based settings with children.

Schedule of Completion

	Year 0: January - August 2024				Year 1: August 2024 - July 2025				Year 2: August 2025 - May 2026			
	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum
Year 0: Pilot study and information gathering	X	X	X	X								
Year 1: Library Co-design with UW MLIS Class in Seattle					X							
Year 1: Capstone - Consolidate Fall 2024 data and create a single core game with mechanics and multiple storylines						X						
Year 1: Capstone - Co-design with teens to refine the core game mechanics.							X					
Year 1: Refinement - Finalize design of single tabletop game for digital civic engagement (offline first, online second).								X				
Year 2: Library Co-design and test with UW MLIS Class and libraries									X			
Year 2: Capstone - Consolidate Fall 2025 data and make final preparations for testing and evaluation										X		
Year 2: Capstone - Testing online and local designs in different libraries (urban, suburban, rural)											X	
Year 2: Refinement - Finalize single core game mechanics with multiple storylines (both offline and online versions)											X	X
Year 2: Build repository for national dissemination												X
Work with collaborators to disseminate the materials and activities.												X
Create digital civic engagement and youth report, communications, publications, and outreach						X	X	X	X	X	X	X
Create curriculum and activities for libraries								X	X	X	X	X

Performance Measurement Plan

Performance measure	Data to collect	Sources of data	Methods	Schedule
KNOWLEDGE of youth and misinformation through co-design	Design artifacts from co-design; observations of co-design	<i>Target group</i> (children, teens, librarians); <i>beneficiary group</i> (children patrons, other librarians); MLIS students; advisory board	Co-design sessions (video recordings); qualitative analysis	Years 1 - 2 → Weekly co-design for Fall; weekly analysis in Winter; weekly testing in Spring.
Effectiveness	Twice per year (1&2) we will prepare a report of number of children engaged, volume of data collected			
Efficiency	Twice per year (1&2) we will compare committed versus allocated time of target group participants (children, teen facilitators, and librarians).			
Quality	Twice per year (1&2) we will conduct an assessment of data quality, to inform course corrections as needed. All co-design sessions are video recorded. At end of years 1 and 2, first and second drafts of white paper will be reviewed by advisory board and other experts			
Timeliness	Twice per year (1&2) we will compare actuals versus targets. Year 1 target is 30 children 8 times across 2 libraries. Year 2 target is 20 - 30 children 8 times across 2 libraries.			

Performance measure	Data to collect	Sources of data	Methods	Schedule
ARTIFACTS and PRODUCTS to address digital civic engagement in youth.	Observations of usage; artifacts from co-design; perceptions and opinions of usage; log files and analytics.	<i>Target group</i> (children, teens, librarians); <i>beneficiary group</i> (children patrons; other librarians); advisory board	Participatory design; usability testing; interviews	Years 1 - 2 → Weekly co-design for Fall; weekly analysis in Winter; weekly testing in Spring.
Effectiveness	Twice per year (1&2) we will prepare a report enumerating and describing each of the artifacts. Report will include all artifact ideas, and compare the number of artifacts that have been selected for high fidelity prototyping against our target (year 1 two play-based digital activities; year 2 two play-based digital activities)			
Efficiency	Twice per year (1&2) we will compare committed versus allocated time of the target group for for generating artifacts			
Quality	Twice per year (1&2) we will interview librarians, teens, and advisory board members for their opinions on the quality of the artifacts			
Timeliness	Every 3 months each librarian will complete a templated report covering both numeric data and perceptions			

Performance measure	Data to collect	Sources of data	Methods	Schedule
CURRICULUM for librarians and educators	Observations of usage; artifacts from co-design; perceptions and opinions of usage; log files and analytics.	Target group (children, teens, librarians); beneficiary group (children patrons; other librarians); advisory board	Participatory design; usability testing; interviews	Years 1 - 2 → Weekly co-design for Fall; weekly analysis in Winter; weekly testing in Spring.
Effectiveness	Twice per year (1&2) we will prepare a report describing the opinions of librarians and teens about the co-design process (from interviews), and the PI teams assessment of the children's experience (from observations)			
Efficiency	Twice per year (1&2) we will compare committed versus allocated time of target group stakeholders			
Quality	Twice per year (1&2) we will interview librarians, teens, and advisory board members for their opinions on the quality of the co-design process			
Timeliness	Every 3 months each librarian will complete a templated report about their perceptions of the co-design process			

Performance measure	Data to collect	Sources of data	Methods	Schedule
DISSEMINATION of Knowledge, Artifacts, and Process	Log files and analytics; qualitative data (e.g., surveys, interviews)	Beneficiary group (children patrons; other librarians); website analytics; conferences; advisory board	Website repository analytics; Conference attendance; Usability testing	Year 2 → Weekly analysis of the website and data collection.
Effectiveness	At the end of the project we will report on the number of beneficiary group members who have downloaded (a) artifacts (b) co-design process; participated in webinars; and participated in conference workshops.			
Efficiency	We will be looking at the usage of the repository multiple times throughout the implementation.			
Quality	At the end of Year 2 we will interview librarians and advisory board members for their opinions on the quality of the communications plan and dissemination resources.			
Timeliness	Monthly (Year 2 and beyond) we will track counts of views, downloads, social media impressions, and webinar attendance			

Digital Products Plan

Type: What digital products will you create?

We are creating four types of digital products for distribution:

- A digital civic engagement white paper report that will tackle strategies that librarians and families can take on to combat misinformation from our co-design perspective;
- A single tabletop role-play game for children around supporting youth digital civic engagement in libraries for both online and local play;
- A scalable online co-design curriculum for librarians to create their own tabletop game activities for children on digital civic engagement; and
- A website repository hub through Loki's Loop for accessing all project resources (reports, blogs, papers, play-based digital activities, curriculum, etc.)

Availability: How will you make your digital products openly available as appropriate?

All of our project outcomes will be freely available via project website under a Creative Commons Attribution 3.0 - Noncommercial U.S. License. We will make preprints of our journal and conference articles available via ResearchWorks, University of Washington's digital repository based on DSpace. With proper attribution, anyone will be able to use, redistribute, as well as modify instructional materials. All the project outcomes will be accessible with standard web browsers.

In Year 2: Summer 2026 we will work with our communications team to (1) package the activities and curriculum, (2) produce accompanying training and implementation resources; (3) create an online hub on Loki's Loop for accessing all resources; and (4) develop a communications strategy with WebJunction for reaching libraries nationwide, including a communications kit with video clips of different lengths for distribution via social media, infographics, and other visually appealing artifacts.

WebJunction's expertise and extensive reach will allow us to disseminate our work through articles in Crossroads articles, Webinars, workshops at PLA Conference, and promotion through social media channels. In addition to WebJunction we will leverage UW Information School channels (CIP, GAMER Group, Digital Youth lab) and external partners (Young Adult Library Services Association, the Joan Ganz Cooney Center (Sesame Workshop). In disseminating the curriculum we will encourage libraries to upload the play activities they designed onto our website (Loki's Loop) for further reach. Lastly, we will finalize the whitepaper and disseminate broadly through our open online website. All of our digital materials will be freely accessible and available for use to any youth, librarians, educators, and designers that have a vested interest in misinformation.

Access: What rights will you assert over your digital products, and what limitations, if any, will you place on their use? Will your products implicate privacy concerns or cultural sensitivities, and if so, how will you address them?

The intellectual property status of the digital products we intend to create (e.g., guidelines, reports, digital learning activities) will be licensed under a Creative Commons Attribution 3.0 - Noncommercial U.S. License. We will explain to potential users that they are free to share any reports, guidelines, curriculum, and digital learning activities as long as they attribute the source. With proper attribution, they can copy and redistribute the material in any medium or format. They are also allowed to adapt, remix, transform, and build upon the material for any purpose, even commercially. We have chosen this form of intellectual property status because

we want different libraries, MLIS programs, and designers to use our materials and adapt them to their local contexts. However, we believe that attribution to institutions and designers should be given to properly credit them for their work, and also inform the people using the materials whom they can contact for questions and suggestions.

The ownership rights our organization will assert over new digital products will focus on attribution and appropriate credit. Our digital products will be for open access; we only need appropriate credit. We will notify potential users about relevant terms or conditions by placing a human-readable summary of the Creative Commons Attribution 3.0 U.S. license in our materials.

Because our work involves children, we will take extra precautions to ensure safety and privacy. First, for any materials involving children's names, we will only refer to them through pseudonyms and generic demographics (e.g., age, gender, ethnic background). For any publications involving children's faces (e.g., videos), we will either digitally blur children's faces, select photos that do not show their faces, or we will obtain consent and assent from parents and children for their usage.

Sustainability: How will you address the sustainability of your digital products?

After the project period is complete, we will still be distributing the materials, white paper, and guidelines through channels at the UW. The UW CIP will be supporting these materials beyond the project period. This project will also be the foundation for the creation of new research. The creation of these materials is the start of a larger repository that the UW Digital Youth Lab can study to better understand what makes effective digital tools for misinformation for children and how best to integrate them into educational settings. PI Yip is also a senior research fellow at the Joan Ganz Cooney Center at Sesame Workshop and will work closely with Michael Preston (adviser) on how these designs can be utilized in family-based settings with children.