

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* APPLICANT'S ORGANIZATION

Woodrow Wilson International Center for Scholars

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Mr. * First Name: Mark Middle Name:

* Last Name: Green Suffix:

* Title: President and CEO

* SIGNATURE: Elizabeth Newbury

* DATE: 05/17/2022

Application for Federal Assistance SF-424		
* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application	* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision	* If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify): <input type="text"/>
* 3. Date Received: 05/17/2022	4. Applicant Identifier: <input type="text"/>	
5a. Federal Entity Identifier: <input type="text"/>	5b. Federal Award Identifier: <input type="text"/>	
State Use Only:		
6. Date Received by State: <input type="text"/>	7. State Application Identifier: <input type="text"/>	
8. APPLICANT INFORMATION:		
* a. Legal Name: Woodrow Wilson International Center for Scholars		
* b. Employer/Taxpayer Identification Number (EIN/TIN): (b)(6)	* c. UEI: EJFEUDHTNE34	
d. Address:		
* Street1: One Woodrow Wilson Plaza	<input type="text"/>	
Street2: 1300 Pennsylvania Ave. NW	<input type="text"/>	
* City: Washington	<input type="text"/>	
County/Parish: <input type="text"/>		
* State: DC: District of Columbia	<input type="text"/>	
Province: <input type="text"/>		
* Country: USA: UNITED STATES	<input type="text"/>	
* Zip / Postal Code: 20004-3027	<input type="text"/>	
e. Organizational Unit:		
Department Name: Science & Tech Innovation Prog	Division Name: Serious Games Initiative	
f. Name and contact information of person to be contacted on matters involving this application:		
Prefix: Dr.	* First Name: Elizabeth	
Middle Name: Marie Howell	<input type="text"/>	
* Last Name: Newbury	<input type="text"/>	
Suffix: <input type="text"/>		
Title: Director, Serious Games Initiative		
Organizational Affiliation: Woodrow Wilson International Center for Scholars		
* Telephone Number: (b)(6)	Fax Number: 202-691-4001	
* Email: (b)(6)	<input type="text"/>	

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Homeland Security - FEMA

11. Catalog of Federal Domestic Assistance Number:

97.132

CFDA Title:

Financial Assistance for Targeted Violence and Terrorism Prevention

*** 12. Funding Opportunity Number:**

DHS-22-TTP-132-00-01

* Title:

Fiscal Year (FY) 2022 Targeted Violence and Terrorism Prevention (TVTP)

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Defenders Against Disinformation: Defeating Disinformation with Digital Gaming

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="750,000.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="750,000.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes No

If "Yes", provide explanation and attach

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

BUDGET INFORMATION - Non-Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. <input type="text"/>	<input type="text"/>	\$ <input type="text" value="750000.00"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="750000.00"/>
2. <input type="text"/>	<input type="text"/>	<input type="text" value="750000.00"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="750000.00"/>
3. <input type="text"/>	<input type="text"/>	<input type="text" value="750000.00"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="750000.00"/>
4. <input type="text"/>	<input type="text"/>	<input type="text" value="750000.00"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="750000.00"/>
5. Totals		\$ <input type="text" value="750,000.00"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="750,000.00"/>



Wilson
Center



Serious Games
Initiative

Defenders Against Disinformation: Defeating Disinformation with Digital Gaming



Project Abstract: This project targets disinformation as a means of devaluing a recruitment tool for radicalization. The Wilson Center's Serious Games Initiative will develop an educational digital game and supportive materials for educating students in secondary schools in NorthEast Washington Educational Service District 101 (ESD 101) in Washington State on disinformation. Specifically, this digital educational game and learning program will help students understand different strategies used to spread disinformation by malignant actors and provide students with a hands-on learning experience around strategies and policies to combat disinformation at the institutional level.

Application tracks: Innovation Track; Raising Societal Awareness; Civic Engagement; Media Literacy and Online Critical Thinking Initiatives

Funds Requested: \$750,000 | ND Grants EMW#

The Wilson Center | Serious Games Initiative | 1300 Pennsylvania Ave, Washington, DC 20004

1. Needs Assessment

Disinformation and misinformation are tools used by terrorist organizations on social media to radicalize at-risk audiences such as youth (c.f. Piazza, 2020). Part of its effectiveness is in capitalizing on existing beliefs, particularly fears, that those audiences have and amplifying them (Johnson, 2018). Disinformation can be used to distract and divide audiences, marginalizing them from outside influence through the targeted promotion of extreme beliefs. This puts those audiences at risk for greater influence from terrorist organizations in both recruitment and radicalization.

In a forthcoming piece “A Million Clicks to Freedom: The Virtual Battlefield of Ideas in the Arab World” by Prof. Nadia Oweidat, Fellow at the Wilson Center, the impact of social media on youth audiences is underscored as a key dimension to understanding the state of divisive, terrorist tactics. As a tool to radicalization, youth are particularly vulnerable to disinformation due in part to the prevalence and reliance on social media combined with a lack of media literacy (Frau-Meigs, D., 2019). In one study, less than 20 percent of high schoolers seriously questioned the source or sources of images on social media (Wineburg & McGrew, 2016). Disinformation is a clear threat when considering its potential diverse nature and the means in which it can be used to radicalize young people.

To address that threat, this project would serve middle school and early high school students in NorthEast Washington Educational Service District 101 (ESD 101). There are over 92,000 students enrolled in ESD 101, with students from 6th to 9th grade consisting of 28,414. For the entire district, 49.9% of the district qualifying as low-income according to the Washington Office of Superintendent of Public Instruction’s annual report card for 2021-2022 (Washington State Report Card, n.d.).

There are some projects in process that target this population, specifically for in-classroom use, that address disinformation:

1. Upcoming projects supported by the **Media Literacy & Digital Citizenship Grants** from the Washington Office of Superintendent of Public Instruction (OSPI) (Media Literacy & Digital Citizenship Grants, n.d.). Projects are evolving from Franklin High School in Seattle and from Battleground, LaCenter, Longview, Vancouver, and Washougal School Districts, who are developing media literacy curriculums, which will be posted onto the Washington OER Hub.
2. **Existing resources on the Washington Open Educational Resources (OER) Hub.** This hub is a digital access point for educators to download curriculum-based activities. It currently includes 18 curriculum-based activities (Media Literacy & Digital Citizenship Collection Resources, n.d.) that focus on media literacy and/or content pertaining to disinformation, deepfakes, etc. The most visited activity has been saved only 34 times, and are largely activity (e.g. searching the internet) or PowerPoint-based learning modules.
3. **Nationally available digital tools.** There are other digital tools, specifically games, that address disinformation that could be used in the classroom setting but in conversation with educators in ESD 101, are not used due to a lack of integration with the classroom. These include but may not be limited to:

- Breaking Harmony Square, developed by the U.S. Department of State’s Global Engagement Center (GEC) and the U.S. Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency (CISA), in collaboration with DROG and the University of Cambridge.
- Bad News, developed by DROG
- Newsfeed Defender, developed for iCivics by Filament Games
- iReporter, developed by BBC
- Factitious, developed by American University (no longer available)

These games are/were freely available online, and range in approach from putting learners in the position of identifying false information based on the headline or short article (Factitious), putting learners in the shoes of a malign actor to understand how disinformation is created (Breaking Harmony Square, Bad News), or emphasizing the ways in which integrity of news can be preserved online (iReporter, Newsfeed Defender).

Combined, these resources focus primarily on two learning objectives: a) how to identify disinformation; b) how disinformation spreads. These are critically important lessons, however, do not address another critical need: how to stop disinformation. When this is presented, it is largely in an awareness module and inaction (“don’t share disinformation”) which puts the burden of action strictly on individuals. There are many solutions beyond what one person can do.

One of the fears with disinformation is that solutions feel out of the hands of individual action. Disinformation is a systematic problem, and many of the solutions can take place at the institutional level. This game would illustrate solutions to disinformation and empower learners. The Wilson Center has a history of leveraging the medium of games around such topics as international policy, the federal budget and national debt, all by promoting research and through a nonpartisan lens. In doing so, we allow learners a space to understand policy and empower them beyond the game experience itself.

2. Program Design

This program would build off of previous practices to combat disinformation. Studies have illustrated an effective prevention method for disinformation is to use media to “inoculate” key audiences against disinformation, such as through watching videos that identify common strategies for disinformation so that the audiences are aware of malign actor strategies (Lewandowsky & Yesilada, 2021) or playing games that pre-bunk players and make them more resilient in the face of disinformation (Basol et al., 2020). This line of research suggests that through exposure to disinformation, audiences will become more resilient in the face of disinformation.

However, while these approaches make players more likely to question disinformation, they do not teach audiences how to prevent or defeat disinformation. The focus is largely on individual action of “not spreading” disinformation, but this is only part of the way to combat disinformation. In fact, a key component of health messaging using an inoculation method is the empowerment of audiences to feel they can do something about the problem (Jackson et al., 2015).

In the realm of disinformation, prevention must be coupled with other, more systematic and institutional levels of prevention that go beyond an individual's capacity for action, such as governmental or industry action (Mutisya, 2019). There are many courses of action that go beyond an individual capacity to an institutional level. The Wilson Center, a nonpartisan, non-advocacy think tank based in Washington, D.C., created a workshop on Defeating Disinformation. The audience for this workshop was primarily Members of Parliament, Congressmen, and staff from the UK, Europe, Brazil, and the US. For this workshop, a tabletop exercise (wargame) was created that relied on the RESIST Toolkit developed by the UK Government Communication Service (c.f. Pamment, 2021). It was a hands-on exercise to teach workshop participants not only how to identify disinformation, but how to work across stakeholder groups (i.e. media, industry, and government) to respond to disinformation – and significantly for prevention, the need to formulate both short-term and long-term collaborative plans of action.

Qualitative analysis found the gaming exercise to reinforce those strategies, and that more was needed to help understand the different strategies that were needed at the institutional level. Therefore, we propose putting the power of this strategy process into a format the students of NorthEast Washington Educational Service District 101 can really engage with: a digital game focusing on disinformation tactics.

About Serious Games

One of the most effective mediums for education, due in part to its link to high-motivation, knowledge-retention and self-directed learning, are games. Serious games, or games designed for non-entertainment purposes such as education, can be used to empower players and present information in a way that gives them ownership over their own learning process due to the interactivity of the medium. The most prevalent learning outcomes for games include knowledge acquisition, skill development, and cognitive training (Boyle et al., 2016; Connolly et al., 2012). Learning facts or key messaging points on the topic that the game covers, or knowledge acquisition, is a vital part of an educational experience -- particularly when the game seeks to address gaps in knowledge. Games can improve motivation to learn (Lehman et al., 2017), specifically by increasing enjoyment and engagement (e.g. Garneli et al., 2017).

A key question about any educational outreach is mapping knowledge gains and acquisition (Connolly et al., 2012). From games that can help gain computational and programming knowledge in STEM (Lin et al., 2020), math literacy (Brezovszky et al., 2019), measuring media literacy (Grace & Hone, 2019), to American history (Breuer & Bente, 2010), knowledge acquisition through serious games is an area of demonstrated potential. Within the classroom, serious games can be a more effective tool for knowledge gains when compared to traditional strategies (Ayo-Vaughan & Amosun, 2016; Brezovszky et al., 2019; Connolly et al., 2012). Serious games can also extend learning outside of the classroom and have a demonstrated impact (Grace & Hone, 2019; Huizenga et al., 2019).

Therefore, the first goal of this program is to leverage a serious game to help improve understanding about how disinformation can be implemented by malignant actors. The second goal is to help students gain knowledge about different ways in which we can mitigate disinformation at the societal level. In doing so, we will help empower students to not only identify different disinformation strategies but also that something can be done about the spread of disinformation.

A. Game Concept



Figure 1 Concept art provided by Filament Games

In past games through the Wilson Center, the ethos of empowering players to action has been central. The first game ever produced through the Serious Games Initiative was called *Budget Hero*, which puts players as the superhero of the federal budget to conquer national debt. Combined with its predecessor, *Fiscal Ship*, these games reached over 3.5 million plays worldwide.

In a similar vein of empowering players, this game would put players in the role of managing a superhero team, representing three “agents” or different stakeholder groups with their own powers, e.g.:

- Government (example powers: enacting national policy)
- Media (example powers: promoting literacy, validating sources)
- Industry (example powers: setting up security measures, flagging disinformation on platforms)

Players will see new emerging threats of disinformation, based off case studies of disinformation threats from past years validated by disinformation scholars at the Wilson Center and beyond (see B. Process). Players must use their agents’ powers to address tactically. Each threat will have its own unique dimensions that can be countered by the superheroes. They will be scaled on three different powers:

- Division: how effective the disinformation causes polarization
- Virulence: how effective a threat is at spreading across information networks
- Resources: how backed by different organizations that purposefully move the threat forward

For example, a grassroots call around fairly harmless offensive rhetoric might be low on its divisive qualities, but high on how effective a threat is at spreading across information networks. In contrast, a government backed disinformation lower on virulence due to its targeted nature, but heavy on resources. The specifics of both the variances in threats and in strategies to mitigate disinformation will be developed through interviews with disinformation experts.

The mechanics of the game will reinforce learning goals. The player operates the game in a turn-based strategic format, tracking the threats status and strategy while developing plans of action across their superhero team. For example, a threat might have enough resources to create thousands of additional bot accounts to further spread across new social networks. The player can in turn decide how to use their agents to mitigate its next move. Each agent choice the player has contains a specific cost, which means they cannot use all strategies every turn and must choose carefully. This will reinforce player choice, strategic thinking, and a careful analysis of both disinformation threats as well as strategies to counter those threats.

The purpose of the game is to not only help students understand different types of disinformation (through the villains of the game), but also to motivate them to learn more beyond the game. Capitalizing on a familiar genre (superheroes) will help lower the barrier of entry and hopefully make students more engaged in the learning process. By using their superhero team's powers across villains, they will also gain repeated exposure and personal familiarity with different capacities across institutional stakeholders. Thus, this will meet the second goal of addressing an understanding of what solutions are available to mitigate disinformation.

B. Process

Game development requires multiple stages, with the majority of work focused on testing the mechanics and content to ensure a quality product. The initial phase includes the concept stage, pre-production stage, and prototyping stage, which is followed by the production of the game (Novak, 2011).

The Wilson Center uses an iterative design process, ensuring the end product is a viable learning tool which has in turn led to successful games in terms of both distribution and learning outcomes. First, the content of the game is established -- in this case, case studies and interviews with experts at and beyond the Wilson Center in disinformation. Then, bringing in a focus group of students, the game mechanics are tested and refined several times based on player reactions. Key throughout this is to evaluate everything from the user interface (is it easy to navigate?), the game mechanics, accessibility of content, and overall experience (do students learn from playing this game). This ensures the game is engaging, accessible, and that the game content and mechanics work together to facilitate the learning goals.

Year One

During year one, game development and prototype testing, the primary resources needed are time, expertise (both game development and disinformation), financial resources to develop the game and educational materials, technology development (provided through Filament games), and stakeholders for feedback and testing. Supplies needed are limited to a qualitative analysis software, Atlas.Ti, which will support aggregation of information and feedback throughout all testing phases, and communication software, such as email and Zoom. Potentially, IRB approval may be needed as part of the prototype phase; the Smithsonian Institution's Office of Sponsored Projects will be consulted.

1. **Research (Months 1-5):** Broken into parts: First, content curation. Tapping its extensive network of disinformation experts through interviews and data gathering to build out assumptions on case examples of successful disinformation attacks and mitigation tactics for disinformation at the institutional level. The Serious Games Initiative will use this research to inform the mechanics of the game, taking into consideration how this content can be made accessible and easily understood by students. Second, targeted interviews with educators, reviewing content and accessibility of technology for classroom usage. The disinformation experts and educators will be invited to join an advisory board, which will support “peer-review” of the game throughout the process (e.g. provide feedback on the design and assumptions). Third, the Serious Games Initiative will also research necessary technological requirements that will inform distribution of the game within ESD 101 (such as preferred platforms).
2. **Planning (Month 4-5):** Game design will begin with Filament Games. The teams will explore the audience, learning outcomes, game goals, technology, and research and develop a plan of action (“game design document”) that addresses these needs. The game design document will be the blueprint, and will include wireframes – a technical outline – that demonstrate the game mechanics, content, feedback, and user experience. The look and feel (the visual style) of the game will also be developed, including visual mockups of the game and characters. Throughout, accessibility to audiences will be evaluated while still maintaining the depth and nuance required to understand disinformation. Together, we will begin to brainstorm ideas for the overall creative concept, narrative, and possible game mechanics. The outcome will be a workplan for proceeding to the development stage.
3. **Game Development (Months 6-12):** During this stage, the Serious Games Initiative will work iteratively with Filament Games to develop the game prototype and with an advisory board of disinformation experts and educators for the supportive educational material. Stakeholder testing will be used to refine the game throughout the process. The final output is a game prototype, which will be used in facilitated testing with educators.
4. **Educational Documentation Development (9-12):** Working with the advisory board, particularly educators, the Serious Games Initiative will develop supportive educational materials for classroom implementation.

Year Two: Game evaluation and distribution

During year two, game evaluation and distribution, the primary resources needed are IRB approval due to interaction with a vulnerable population, support and cooperation from ESD 101 to engage classrooms, and travel or virtual engagement with classrooms. Further, for distribution, the Wilson Center will develop a communication and outreach plan that will include resources to help facilitate distribution in ESD 101 and beyond.

1. **Staggered Classroom Beta Testing (Months 12-16):** The game prototype will be tested across sixteen classrooms in ESD 101 starting at the second year of game development. This means that classrooms will sign up to use the game in selective waves, with enough time for further evaluation and development between each wave. Feedback from each classroom will be used to refine the game and educational materials. The game will be evaluated in terms of both design and accessibility to the age group, as well as in terms of learning outcomes (see C. Monitoring and Evaluation Plan). While we have planned for travel to Washington State,

it is a possibility that these plans may be adapted due to potential COVID restrictions. In this case, the sessions will be held virtually.

2. **Game Refinement (Month 17):** Before digital distribution, a final test on the game and material will be conducted to address any bugs or other errors.
3. **Digital Distribution through OER (Months 18+):** Working with the Washington Office of Superintendent of Public Instruction, the game and supportive materials will be distributed online through the Wilson Center's website and linked to through the OER database. This means the game will be free to all students within ESD 101, as well as the broader Washington State and the nation. A communication plan that includes engagement with educators, local journalists, and other mediums as recommended by educators will be implemented at this time to ensure broadest reach.

C. Monitoring and Evaluation Plan

Success in serious games can be measured in several concrete ways. For example, the number of plays is one metric, or how many people played the game. In this case, a goal would be to have a certain number of classrooms play the game, or a percentage of the target population. This is an achievable goal; with past products produced by the Wilson Center, such as Fiscal Ship and Budget Hero, we have had nearly three million plays worldwide. As this focuses on a local intervention within ESD 101, a goal would be to distribute the game and track percentage of plays during the final phases of the project through mediums like Google Analytics (e.g. 100-300 plays within the first month; a 1,000 before the end of the school year).

However, this metric does little to measure the impact of the intervention and is not an accurate measure of the desired outcomes, such as learning or motivation to learn. The Wilson Center and the BRAVA Foundation of Brazil created the award-winning serious game Cities in Play (Cidade em Jogo) in 2017 to foster civic engagement at a local level. In a survey BRAVA conducted to help measure the game's impact, 67 percent of students who played the game said they were more interested in politics, 69 percent said they were more willing to monitor the government, and 67 percent said they were more confident in their ability to influence public policies after playing. Games can not only motivate students to learn, but also motivate beyond the game experience to be a gateway for future engagement.

Therefore, one way to measure success is to focus on learning outcomes. During the testing phase of the game, and following distribution of the game, the objective would be to have over 65% of the players being able to demonstrate having learned about disinformation, its impacts, and processes of how to mitigate disinformation at a macro-level. A secondary measure would be to assess whether students feel there is more that can be done about disinformation, as a way to measure efficacy. In addition, we will track how "sticky" the learning is by distributing a survey two weeks post intervention as a way to map to longitudinal learning (Pfirman et al., 2015). In the case of the latter, evidence suggests that game players are able to retain more information through gameplay than comparable other exercises, such as reading an article.

For all evaluation that uses human subjects and an emphasis on personal attitudes, beliefs, or learning outcomes, the research protocols will be reviewed by the International Review Board under the Smithsonian Institution's Office of Sponsored Projects. This process can take a month and a half for review, but given that this game is serving a minority population it is a step that must be addressed before proceeding. Dr. Newbury has engaged the IRB before for similar research programs on game development and games research, and these are typically assessed as

a low-risk situations that nevertheless require parental consent. All protocols to address school-based programming will be navigated during the same period. See Appendix G also for the Human Subjects Research Compliance Determination Form from DHS.

For the prototype:

Testing of the prototype will take the form of one-on-one interviews or focus group testing of both educators and disinformation experts, relying on their professional expertise. Both of these methods are exploratory qualitative methods that allow rich feedback on the game prototype. Depending on the stage of the prototype, the process navigates the participant through the art, user interface, and content of the game. An example of questions are included in Appendix F. The Smithsonian Institute’s Office of Sponsored Projects will be consulted to ensure all IRB protocols are being met, however, unless the sample is expanded to students we will most likely be relying on the professional opinion of educators/disinformation experts which does not traditionally fall under the need for an IRB-approved protocol.

For classroom testing:

A combination of survey design, field observation and debrief will be used to assess the game within the classroom. This stage typically takes place in-person, however, if COVID hits, may need to be adjusted for a virtual engagement with the classroom.

Prior to the game play, students will receive instruction on disinformation that primes them for the activity. After the game play, students will be debriefed, with a particular lens towards understanding what the play experience was like for students, what stuck with them about the experience, and assessing attitudinal change.

For the survey design, a reliable method is to use a pre- and post-game survey in order to assess learning outcomes (c.f. Pfirman et al., 2015). Prior to the game, this may include capturing information about how much the students know about disinformation, identifying disinformation, or ways to mitigate disinformation as mapped to the goals. A similar survey can be used after the game play, to assess whether students gained knowledge after the game intervention. Two weeks after the game play, we will also ask educators to distribute a short survey to those students who participated to map longitudinal learning, with similar questions to the pre- and post-survey.

Field observation will triangulate the quantitative analysis of the surveys, focusing on observing students and how they engage with the game during play. This is helpful for capturing reactions throughout the game experience and content, as well as mapping technologically if there are any issues with navigating the game. It will improve the quality of the game by allowing us to have more data on the actual play experience, while the other two methods allow for a pre- and post-analysis.

3. Organization(s) and Key Personnel

Chartered by Congress in 1968, **the Wilson Center** is the nation’s key non-partisan policy forum for tackling global issues and the world’s #1 regional studies think tank. As an international convening organization with one of the first programs devoted to the creation of educational games, the Wilson Center is uniquely positioned to develop a game to increase understanding on ocean plastics and policy solutions.

The Serious Games Initiative (SGI) was founded with one goal: to use games to engage the broader public in policy discourse. It is one thing to read about the potential impact of policy solutions – it is another to live it. Since its founding, SGI has been a leader in the field of serious games. Under the umbrella of the Science and Technology Innovation Program, SGI is using games as a dynamic technology to communicate cutting edge research at the Wilson Center and beyond. Past games include Budget Hero and the Fiscal Ship, games about the federal budget which have received over 3 million plays worldwide; Cards Against Calamity, a board game about coastal resilience; and a forthcoming game, The Plastic Pipeline, funded in-part by the Luce Foundation and National Geographic Society on ocean plastics.

Dr. Elizabeth M. H. Newbury is the Director of the Wilson Center’s **Serious Games Initiative (SGI)**, which was founded to engage the broader public in policy discourse. Newbury earned her doctorate in Communication from Cornell University, specializing in new media and game studies. She leverages this expertise to develop games for civic education and to bridge the gap between policy education and policy research for a wide range of audiences, from students to Congressional staff and beyond. Among other endeavors, she leads the Federal Games Guild, an informal working group of federal agencies that leverage game-based learning. She has presented research on the impacts of game-based learning at SXSW:Edu, Games for Change, and more.

(b)(6) is a Program Associate with the Science Technology and Innovation Program, working on science education, space, cybersecurity, 5G, and artificial intelligence policy. Previously, she interned in the Office of the Director, President, and CEO at the Wilson Center, where she researched and drafted memoranda on contemporary topics in international affairs and national security. She received her BA in International Studies from the School of International Service at American University.

Founded in 2005, **Filament Games** is a full-service digital studio that specializes in learning game development on a for-hire basis. They’ve completed over 200 projects since our founding and have worked with some of the biggest names in education – folks like Amazon, Scholastic, Smithsonian, Oculus, National Geographic, PBS, Television Ontario (TVO), McGraw-Hill, and even the U.S. Department of Education.

Northeast Washington Education Service District 101 serves 59 school districts in Washington State. NEWESD 101 is responsible for the seven northeastern counties of the state, providing cooperative services in Adams, Ferry, Lincoln, Pend Oreille, Spokane, Stevens and Whitman counties. NEWESD 101 is the state's largest ESD in the number of districts served, counties served and geographic region served. An Educational Service District, or ESD, is a regional education unit in the U.S. state of Washington. Organizationally different from a school district, a single ESD in Washington serves dozens of school districts. ESDs are established to allow school districts to work, plan, and buy equipment collectively.

Tammie Schrader is the regional computer science and science coordinator for the Northeast Washington Education Service District 101. Prior to this, Schrader taught science and career and technical education classes to middle school students in Cheney, Washington, for 15 years. She also teaches science methods classes at Whitworth University and Gonzaga University. Schrader contributed on a National Science Foundation grant with Filament Games working on implementing educational video games in science classes and spoke at the White House Game

Jam in 2014. Schrader is a National Board certified teacher and served as a U.S. Department of Education Fellow in 2008–2009.

4. Sustainability

The game will be publicly available to all classrooms within Washington State, not just ESD 101, by its inclusion in the OER and publication on the Wilson Center website. Once developed, the game will need minimal maintenance to remain up-to-date as it will be designed as a closed system. If additional funding is needed for game maintenance, funding from previous sources, such as foundational grants or industry leaders, may be used to help support this through the Wilson Center’s development plan. Based on past experience, this would be minimal input and could be covered by operating costs of the program.

The mission of the Serious Games Initiative at the Wilson Center is to make public policy fun and accessible to the nation. Once a product has been developed and posted to the Wilson Center website, it is likely that it will receive national attention. Wilson Center staff and fellows disinformation and science portfolios are regularly interviewed by and/or write for many national and international media organizations, including The New York Times, NPR, the LA Times, Washington Post, Foreign Policy, CSPAN, USA Today, The Economist, Scientific American, Nature, Chronicles of Higher Education, E&E News, and the Atlantic. The Wilson Center also has an in-house studio, dedicated podcasts, and a global social media presence. As noted previously, our past games have reached millions worldwide, and we would hope to continue that tradition after serving the students of ESD 101.

5. Budget Detail and Narrative

Budget Category	Federal Request
Personnel	\$ 267,679
Fringe Benefits	\$ 69,163
Travel	\$ 3,746
Supplies	\$ 1,120
Contractual	\$300,000
Other	\$800
<i>Total Direct Costs</i>	\$ 649,508
Indirect Costs (16.73%) (see Appendix E)	\$107,492
TOTAL PROJECT COSTS	\$ 750,000

Personnel:

Director of the Serious Games Initiative, Elizabeth Newbury: Leadership of overall project, devoting 56% time for two years, approx. \$107,313. Dr. Newbury is particularly suited to this form of project management, which will require day-to-day oversight including project planning, timeline assessment, recruitment, and coordination across the Wilson Center, Filament Games, and ESD 101. In addition, she will be the PI on IRB documentation and primarily responsible for the development and implementation of all research protocols, as well as the development of educational materials.

(b)(6)

Will support the research component of the project in the first year, for 60% time at \$45,841. This will entail not only the synthesis of existing case studies that can be used to inform the content of the game but supporting the initial iterative testing of the game.

Program Assistant: Not hired. Calculated at a year and a half of full-time support for administrative tasks for 50% time at \$86,090 using the GS-7 Step 5 payscale. Specifically will help support efforts related to the game, specifically supporting the Director of the Serious Games Initiative's outreach and project management, managing the budget, and engagement across stakeholders.

Interns: Not hired. The Wilson Center's policy is to only offer paid internships, with the current rate being \$16.51 per hour with a potential 5% COLA increase per year. Current funding streams will cover intern support for the first year, but we anticipate needing an intern to support research transcription and support of developing all products. Intern will charge a total of \$28,436.

Fringe Benefits: Calculated at 28% for all staff at the Wilson Center, and 7.65% for interns. The total fringe benefits for the above staff and intern would be \$69,163.

Travel: Calculated as 2 people, going to Spokane, WA (largest city in the region) and staying for one week under the GSA per diem rate, e.g. \$114 for hotel and \$74 for meals and incidentals. Total travel costs would be \$3,746

Supplies: Access to Atlas.TI, a qualitative research software that will be used to analyze interviews and field notes from classroom testing. Cloud service is \$28 per month per user, calculated here for 24 months for two users. Total supplies costs would be \$1,120.

Contractual: The program has identified working with Filament Games to complete the game concept, with funding estimate of \$300,000. This includes X number hours of labor, and the completion of a digital game at the end of this grant award system.

Other: Given that we are asking for educators to volunteer their classrooms, we would obligate \$50 per classroom to incentivize participation. This would go directly to the sixteen classrooms that we would sample for testing the prototype. Total other direct costs would be \$800.

References

- Ayo Vaughan, A. F., & Amosun, P. A. (2016). Effects of two modes of active learning strategies on school age childrens' civic competence in leadership value concepts in social studies and civic education. *Journal of Educational and Social Research*, 6(2), 213–224. <https://doi.org/10.5901/jesr.2016.v6n2p213>
- Basol, M., Roozenbeek, J., & van der Linden, S. (2020). Good news about bad news: Gamified inoculation boosts confidence and cognitive immunity against fake news. *Journal of Cognition*, 3(1).
- Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., Lim, T., Ninaus, M., Ribeiro, C., & Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers & Education*, 94, 178-192. <https://doi.org/10.1016/j.compedu.2015.11.003>
- Breuer, J., & Bente, G. (2010). Why so serious? On the relation of serious games and learning. *Journal for Computer Game Culture*, 4(1), 7-24. <https://hal.archives-ouvertes.fr/hal-00692052>
- Brezovszky, B., McMullen, J., Veermans, K., Hannula-Sormunen, M. M., Rodríguez-Aflecht, G., Pongsakdi, N., Laakkonen, E., & Lehtinen, E. (2019). Effects of a mathematics game-based learning environment on primary school students' adaptive number knowledge. *Computers and Education*, 128, 63–74. <https://doi.org/10.1016/j.compedu.2018.09.011>
- Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education*, 59(2), 661-686. <https://doi.org/10.1016/j.compedu.2012.03.004>
- Frau-Meigs, D. (2019) Disinformation, Disinformation, Radicalisation and Other Information Disorders: Lessons Learnt for Media and Information Literacy. In *Media Education as a Challenge*, edited by Sławomir Ratajski, pp. 75-95. Academy of Fine Arts in Warsaw & Polish National Commission for UNESCO. Warsaw, Poland.
- Garneli, V., Giannakos, M., & Chorianopoulos, K. (2017). Serious games as a malleable learning medium: The effects of narrative, gameplay, and making on students' performance and attitudes. *British Journal of Educational Technology*, 48(3), 842-859.
- Grace, L., & Hone, B. (2019). Factitious: Large scale computer game to fight fake news and improve news literacy. In *Conference on Human Factors in Computing Systems - Proceedings*. <https://doi.org/10.1145/3290607.3299046>
- Huizenga, J., Admiraal, W., Dam, G. ten, & Voogt, J. (2019). Mobile game-based learning in secondary education: Students' immersion, game activities, team performance and learning outcomes. *Computers in Human Behavior*, 99, 137–143. <https://doi.org/10.1016/j.chb.2019.05.020>
- Jackson, B., Compton, J., Whiddett, R., Anthony, D. R., & Dimmock, J. A. (2015). Preempting performance challenges: The effects of inoculation messaging on attacks to task self-efficacy. *PloS one*, 10(4), e0124886.

- Johnson, J. (2018). The self-radicalization of white men: “Fake news” and the affective networking of paranoia. *Communication Culture & Critique*, 11(1), 100-115.
- Lehman, B., Hebert, D., Jackson, G. T., & Grace, L. (2017). Affect and experience: Case studies in games and test-taking. *In Conference on Human Factors in Computing Systems - Proceedings*, 917–924. <https://doi.org/10.1145/3027063.3053341>
- Lewandowsky, S., & Yesilada, M. (2021). Inoculating against the spread of Islamophobic and radical-Islamist disinformation. *Cognitive Research: Principles and Implications*, 6(1), 1-15.
- Lin, Q., Yin, Y., Tang, X., Hadad, R., & Zhai, X. (2020). Assessing learning in technology-rich maker activities: A systematic review of empirical research. *Computers and Education*, 157. <https://doi.org/10.1016/j.compedu.2020.103944>
- Media Literacy & Digital Citizenship Collection Resources*. OER Commons. (n.d.). Retrieved May 11, 2022, from https://www.oercommons.org/curated-collections/1381?__hub_id=1
- Media Literacy & Digital Citizenship Grants*. Washington Office of Superintendent of Public Instruction. (n.d.). Retrieved May 1, 2022, from <https://www.k12.wa.us/policy-funding/school-technology/media-literacy-digital-citizenship/media-literacy-digital-citizenship-grants>
- Mutisya, L. M.. (2019) Countering Fake News and Hate Speech in Kenya: A Case for Sustained Media Literacy Programmes. In *Media Education as a Challenge*, edited by Sławomir Ratajski, pp. 97-119. Academy of Fine Arts in Warsaw & Polish National Commission for UNESCO. Warsaw, Poland.
- Novak, J. (2011). *Game development essentials: An introduction*. Cengage Learning.
- Pamment, J. (2022, January 11). *Resist 2 counter disinformation toolkit*. Government Communication Service. Retrieved May 15, 2022, from <https://gcs.civilservice.gov.uk/publications/resist-2-counter-disinformation-toolkit/>
- Pfirman, S. L., Lee, J., O'Garra, T., & Bachrach, E. (2015). Better retention through game-play - EcoChains: Arctic Crisis card game. *American Geophysical Union, Fall Meeting 2015*.
- Piazza, J. A. (2021). Fake news: the effects of social media disinformation on domestic terrorism. *Dynamics of Asymmetric Conflict*, 1-23.
- Washington State Report Card*. Washington Office of Superintendent of Public Instruction. (n.d). Retrieved May 1, 2022, from <https://washingtonstatereportcard.ospi.k12.wa.us/>
- Wineburg, S., & McGrew, S. (2016). *Evaluating information: The cornerstone of civic online reasoning*.

Appendix A: Implementation and Measurement Plan (IMP)

Organization Name	Woodrow Wilson International Center for Scholars' Serious Games Initiative
Project Title	Defenders Against Disinformation: Defeating Disinformation with Digital Gaming
Grant Number	DHS-22-TTP-132-00-01
Grant Implementation Period	10/01/2022- 09/30/2024
<hr/> Project Goal Statement <hr/>	
<p>Goal 1a: To improve understanding about how disinformation can be implemented by malignant actors by creating a digital game and supporting educational material (collectively: “intervention”) that uses case examples from global disinformation attacks and codifies different characteristics of successful disinformation attacks.</p> <p>Goal 1b: To improve understanding about different strategies and policies that can be implemented to address disinformation at the institutional (government, industry, and media) level by creating a digital game and supporting educational material (collectively: “intervention”) that translates those strategies into an accessible and fun format.</p> <p>Goal 2: To make this learning tool available to the whole of ESD 101, by putting the game and associated educational content available online and promoting it through online resources for educators.</p>	
<hr/> Target Population <hr/>	
<p>6-9th grade students in NorthEast Washington Educational Service District 101, specifically 16 classrooms (approximately 320-480 students depending on class size) within this district. This area was selected because it serves both urban and rural students, as well as a state-wide push for students to a) participate in Media Literacy & Digital Citizenship training; b) a lack of resources that adequately address disinformation.</p>	

Goal 1a: To improve understanding about how disinformation can be implemented by malignant actors by creating a digital game and supporting educational material (collectively: “intervention”) that uses case examples from global disinformation attacks and codifies different characteristics of successful disinformation attacks.

Goal 1b: To improve understanding about different strategies and policies that can be implemented to address disinformation at the institutional (government, industry, and media) level by creating a digital game and supporting educational material (collectively: “intervention”) that translates those strategies into an accessible and fun format.

Objective 1.1: Before developing the intervention and throughout the development of the intervention, we will consult with at least five disinformation experts that will support a “peer-review” of the content of all intervention material, specifically around the use of case examples of disinformation attacks and potential strategies to mitigate disinformation at the institutional level (henceforth referred to as a collective “game content”).

Objective 1.2: Before developing the intervention and throughout the development of the intervention, we will consult with at least five educators that will support a “peer-review” of all intervention material, to assess the suitability of the intervention and associated material for classroom usage.

Objective 1.3: Through the intervention, we will increase knowledge of the different types of disinformation tactics (i.e. in terms of capacity to divide or the resources used to support them) as well as strategies to defeat disinformation at the institutional level by 65% across 16 classrooms within ESD 101.

Objective 1.4: After the intervention, we will increase motivation to learn more about disinformation, its impacts, and strategies to defeat disinformation at the institutional level by over 50% across 16 classrooms within ESD 101.

Goal 1 IMPLEMENTATION PLAN

Objectives	Activity	Inputs/Resources	Time Frame	Anticipated Outputs
<p>Objective 1.1: Before developing the intervention and throughout the development of the intervention, we will consult with at least five disinformation experts that will support a “peer-review” of the content of all intervention material, specifically around the use of case examples of disinformation attacks and potential strategies to mitigate disinformation at the institutional level (henceforth referred to as a collective “game content”).</p>	<p>Activity 1.1.1 Beginning with Wilson Center expertise, such as Dr. Nadia Oweidat, and former fellows and event attendees at the Wilson Center, create a snowball sample of voluntary experts to interview about disinformation case examples.</p>	<p>Access to experts in disinformation, such as academic professors, industry researchers, and more; relying on the Wilson Center network which has conducted multiple convenings, papers, and other research outputs on disinformation; email to contact experts.</p>	<p>Months 1-3</p>	<p>5 experts committed to being interviewed about case examples of disinformation.</p>
	<p>Activity 1.1.2: Conduct interviews with disinformation experts, focusing on understanding case examples to help inform content of the educational material and game.</p>	<p>Zoom or similar software to record interviews; Atlas.TI to analyze interviews and case examples; staff at the Wilson Center to conduct interviews. IRB approval not needed as experts would be talking about their research or jobs, and not personal attitudes/beliefs, , but the Smithsonian Institution’s Office of Sponsored Projects will be consulted to ensure all protocols for human research are being met.</p>	<p>Months 2-5</p>	<p>5+ interviews; an analysis document to be used in the game development document; advisory members for rest of project.</p>
	<p>Activity 1.1.3: Create an advisory board of experts. Iteratively engage with experts who volunteer to serve in an advisory role across the development of the game, such as by showing them mock-ups or content of the game as it is developed for “peer-review.”</p>	<p>Zoom, email, or similar communication software to keep experts engaged in process; meetings to review content; PowerPoint, Word document, or game products to show content to experts.</p>	<p>Months 6-End of Project</p>	<p>Edits and modifications to the game and educational content in order to ensure accuracy; a game that can be used in classroom beta testing and beyond.</p>

Objectives	Activity	Inputs/Resources	Time Frame	Anticipated Outputs
<p>Objective 1.2: Before developing the intervention and throughout the development of the intervention, we will consult with at least five educators to assess the suitability of the intervention and associated material for classroom usage.</p>	<p>Activity 1.2.1 Beginning with Tammie Schrader’s (ESD 101 coordinator) advisement, create a sample of voluntary educators to review the game concept.</p>	<p>Access to educators; email and recruitment material.</p>	<p>Months 1-3</p>	<p>5 educators committed to being interviewed about case examples of disinformation.</p>
	<p>Activity 1.2.2 Interviews with educators to review game concept and provide feedback on needs for the classroom, checking initial assumptions.</p>	<p>Zoom or similar software to record interviews; Atlas.TI to analyze interviews and case examples; staff at the Wilson Center to conduct interviews. IRB approval not needed as experts would be talking about their research or jobs, and not personal attitudes/beliefs, but the Smithsonian Institution’s Office of Sponsored Projects will be consulted to ensure all protocols for human research are being met.</p>	<p>Months 2-5</p>	<p>5+ interviews; advisory members for rest of project.</p>
	<p>Activity 1.2.3 Create an advisory board of educators to inform iterative design process. Iteratively engage with educators who volunteer to serve in an advisory role across the development of the game, such as by showing them mock-ups or content of the game as it is developed for “peer-review”.</p>	<p>Zoom, email, or similar communication software to keep educators engaged in process; meetings to review content; PowerPoint, Word document, or game products to show content to experts.</p>	<p>Months 6-End of Project</p>	<p>Edits and modifications to the game in order to ensure accuracy and viability for classroom setting; a game that can be used in classroom beta testing and beyond.</p>
	<p>Activity 1.2.4 Develop and review educational documentation that surrounds the game intervention, specifically with an eye to learning goals and fitting with classroom needs.</p>	<p>Zoom, email, or similar communication software to keep educators engaged in process; meetings to review content; Word documents or other documentary software to write out and edit content.</p>	<p>Months 9-12</p>	<p>Edits and modifications to the educational materials in order to ensure accuracy and viability for classroom setting; educational materials that can be used in classroom beta testing and beyond.</p>

Objectives	Activity	Inputs/Resources	Time Frame	Anticipated Outputs
<p>Objective 1.3: Through the intervention, we will increase knowledge of the different types of disinformation strategies by 65% across 16 classrooms within ESD 101.</p>	<p>Activity 1.3.1 Developing a research protocol through the refinement of assessment measures, i.e. interview/focus group questions for prototype testing and survey designs/field observation training for classroom beta testing. Submission for IRB approval through the Smithsonian Institution's Office of Sponsored Projects.</p>	<p>Pre-existing validated measures or research studies outlining previous models for assessment; staff time in developing measures refined for the project.</p>	<p>Months 4-5</p>	<p>IRB approval; a research protocol.</p>
	<p>Activity 1.3.2 In testing the game prototype, refine measurement plan to ensure learning goals are being met, i.e. understanding of case examples, the different types of disinformation attacks and game content.</p>	<p>Zoom, email, or similar communication software to keep experts/educators engaged in process; meetings to review content; PowerPoint, Word document, or game products to show content to experts/educators.</p>	<p>Months 6-12</p>	<p>A written analysis and modification to the game design document of necessary edits and modifications to the game and educational content in order to ensure learning objectives are being met.</p>
	<p>Activity 1.3.3 Recruit classrooms for testing and evaluating the game.</p>	<p>Prior to this, IRB approval to work with vulnerable population; recruitment email correspondences with ESD 101, teachers; permission slips for participation, and addressing any school-specific protocols. Although strictly voluntary, part of the recruitment will also entail honorariums for participating classrooms, given post-participation as both an incentive and acknowledgement of their time.</p>	<p>Months 11-12</p>	<p>Permission from classrooms and a plan of implementation for classroom beta testing.</p>
	<p>Activity 1.3.4 In testing the game through staggered classroom beta testing, conduct pre- and post-intervention testing to measure baseline understanding before the game is implemented, and difference after the game has been implemented.</p>	<p>Travel to classroom settings in ESD 101 or, in case of COVID-level intervention, Zoom or similar communication software to engage in classroom testing; note-taking devices;</p>	<p>Months 12-16</p>	<p>Successful implementation of research design within 16 classrooms in ESD, to facilitate demonstrated knowledge gains and meet learning goals. Data on learning goals for the</p>

Objectives	Activity	Inputs/Resources	Time Frame	Anticipated Outputs
		scripts for testing; educational material and game.		game, which will lead to edits and modifications to the game and educational content to ensure learning objectives are being met.
Objective 1.4: After the intervention, we will increase motivation to learn more about disinformation and its impacts by over 50% across 16 classrooms within ESD 101.	Activity 1.4.1 Developing a research protocol through the refinement of assessment measures, specifically a post-classroom survey to be sent out one month after classroom intervention. Submission for IRB approval through the Smithsonian Institution’s Office of Sponsored Projects.	Pre-existing validated measures or research studies outlining previous models for assessment; staff time in developing measures refined for the project.	Months 4-5	IRB approval; a research protocol.
	Activity 1.4.2 Sending out longitudinal survey two weeks after the classroom testing.	Email or similar communication device.	Months 13-17	Further refinement of the intervention before release and distribution through Washington State’s Open Educational Resources (OER) Hub.

Activity #	Performance Measures & Targets	Data Collection Method and Timeframe
1.1.1	<p>Performance measure: Number of expert commitments to be interviewed.</p> <p>Target: 5 commitments from experts</p>	<p>Meetings and coordination with disinformation experts to secure participation.</p> <p>Months 1-3</p>
1.1.2	<p>Performance measure: Successfully interviewing and engaging disinformation experts around content.</p> <p>Targets: 5+ interviews</p>	<p>Qualitative, semi-structured interviews.</p> <p>Months 2-5</p>
1.1.3	<p>Performance measure: Successfully recruit disinformation experts to join advisory board.</p> <p>Target: 2-3 commitments, recognizing attrition rates</p>	<p>Documented commitment.</p> <p>Months 6-End of Project</p>
1.2.1	<p>Performance measure: Number of educators committed to be interviewed.</p> <p>Target: 5 commitments from educators</p>	<p>Meetings and coordination with disinformation experts to secure participation.</p> <p>Months 1-3</p>
1.2.2	<p>Performance measure: Successfully interviewing and engaging educators in ESD 101 around case examples.</p> <p>Targets: 5+ interviews</p>	<p>Qualitative, semi-structured interviews.</p> <p>Months 2-5</p>
1.2.3	<p>Performance measure: Successfully recruit disinformation educators to join advisory board.</p> <p>Target: 2-3 commitments, recognizing attrition rates</p>	<p>Documented commitment.</p> <p>Months 6-End of Project</p>
1.2.4	<p>Performance measure: Final copy of educational material based on feedback and modifications to refine for classroom setting.</p> <p>Target: A finalized copy of the educational material.</p>	<p>Edits and modifications to the educational materials in order to ensure accuracy and viability for classroom setting.</p> <p>Months 9-12</p>

Activity #	Performance Measures & Targets	Data Collection Method and Timeframe
1.3.1	<p>Performance measure: Successful approval of IRB protocol and established research protocol.</p> <p>Target: One approved IRB protocol to facilitate research design.</p>	<p>Using previous studies for reliable measures and protocols, as well as game design, game content, educational materials, and feedback from educators and administrators in ESD 101 to inform the design of the protocol.</p> <p>Months 4-5</p>
1.3.2	<p>Performance measure: A written analysis and modification to the game design document of necessary edits and modifications to the game and educational content in order to ensure learning objectives are being met.</p> <p>Target: Feedback from across the advisory board (both disinformation experts and educators) to validate the game prototype. Modifications to the game design document, game itself to get the game to past the prototype stage and into a distributable design for classroom testing.</p>	<p>Feedback from advisory board on the game prototype, to assess reliability and validity as an educational tool.</p> <p>Months 6-12</p>
1.3.3	<p>Performance measure: Successful recruitment of classrooms for the study.</p> <p>Target: 16 classrooms across secondary grades.</p>	<p>Email solicitation, setting up pre-classroom visit discussions with educators, permission slip distribution and aggregation, and administrative approval as needed.</p> <p>Months 11-12</p>
1.3.4	<p>Performance Measure: Successful implementation of research design within 16 classrooms in ESD, to facilitate demonstrated knowledge gains and meet learning goals.</p> <p>Target: Demonstrated knowledge gains by over 65% across students in classrooms and robust qualitative feedback on game.</p>	<p>For in-classroom testing, we would use two survey instruments (pre-survey, post-survey,) a debrief discussion guide (c.f. Pfirman et al., 2015), and field observation</p> <p>Months 12-16</p>
1.4.1	<p>Performance measure: Successful approval of IRB protocol and established research protocol.</p> <p>Target: One approved IRB protocol to facilitate research design.</p>	<p>Using previous studies for reliable measures and protocols, as well as game design, game content, educational materials, and feedback from educators and administrators in ESD 101 to inform the design of the protocol.</p> <p>Months 4-5</p>

Activity #	Performance Measures & Targets	Data Collection Method and Timeframe
1.4.2	<p>Performance measure: Successful implementation of a longitudinal survey to demonstrate the long-term impact of the intervention on meet learning goals beyond the immediate experience.</p> <p>Target: Demonstration long-term knowledge gains of over 50% across students in classrooms.</p>	<p>Two-week follow-up survey using validated measures or processes (e.g. Pfirman et al., 2015)</p> <p>Months 13-17</p>

Goal 2: To make this learning tool available to the whole of ESD 101, by putting the game and associated educational content available online and promoting it through online resources for educators.

Objective 2.1: After completing the game and associated testing, making the game available on the Wilson Center’s website for free and linking to it through platforms such as the OER.

Objective 2.2: After the completion of the game, promoting the game through communication and outreach channels to educators in Washington State, especially ESD 101.

Goal 2 IMPLEMENTATION PLAN

Objectives	Activity	Inputs/Resources	Time Frame	Anticipated Outputs
Objective 2.1: After completing the game and associated testing, making the game available on the Wilson Center’s website for free and linking to it through platforms such as the OER.	Activity 2.1.1 To design for this distribution method, working with the Washington Office of Superintendent of Public Instruction, educators and game developers to ensure that design of game and educational material fit the needs for distribution in OER.	Meetings and coordination with the Washington Office of Superintendent of Public Instructions; analysis of other resources on OER; technological understanding of needs to distribute in this way; discussion with educator advisory board on design elements further needed for classroom implementation from OER.	Months 1-5	Parameters needed to ensure game can be distributed in this way. Modifications to the design of the game and educational materials to ensure that it is possible to distribute on OER.
	Activity 2.1.2 To design for this distribution method, working with the staff at the Wilson Center, its associated website developer, and the game developers to ensure that the game is designed in such a way that it can be posted publicly on the Wilson Center website. Posting on the Wilson Center website and distributing through OER will ensure that, if any future updates to the game need to be made, it will be easier to address them.	Meetings and coordination with associated stakeholders from the Wilson Center and game team; technological understanding of needs to distribute in this way; discussions about how this can integrate with OER needs.	Months 6-8	Parameters needed to ensure game can be distributed in this way. Modifications to the design of the game and educational materials to ensure that it is possible to post on the Wilson Center website.

Objectives	Activity	Inputs/Resources	Time Frame	Anticipated Outputs
	Activity 2.1.3 After game completion, posting the game to the Wilson Center’s website and distributing through OER.	Working with previously identified stakeholders to ensure distribution goes smoothly; meetings through email or Zoom for implementation; consistent communication. Setting up Google Analytics on Wilson Center’s website to track plays and access.	Months 18+	A game that is publicly accessible to all of ESD 101 and beyond through the Wilson Center’s website.
Objective 2.2: After the completion of the game, promoting the game through communication and outreach channels to educators in Washington State, especially ESD 101.	Activity 2.2.1 Clarifying with Washington Office of Superintendent of Public Instruction, Tammie Schrader and other instructors to develop communication and outreach plan to ESD 101.	Meetings and email coordination to identify what resources/communication processes are in place with ESD 101 instructors; Google doc or other shared resources to develop plan on; associated graphics and materials for email distribution, social media distribution, and more that would fit into a communication plan.	Months 13-17	A living communication document that is available to partners in ESD 101 to identify modes of action for communication and outreach to ESD 101.
	Activity 2.2.2 After game has been made public, implementing communication and outreach plan to ESD 101, Washington State, and beyond.	Support from Wilson Center’s external relations team, ESD 101, and other parties to help distribute information about the game; emails to public distribution lists; direct outreach to the classrooms involved in the study; social media blasts; submitting a press release to local journalists to help facilitate information about the game.	Months 18+	Educators within ESD 101, educators within Washington State, and potentially beyond implementing the game within their classrooms.

Goal 2 MEASUREMENT PLAN

Activity #	Performance Measures & Targets	Data Collection Method and Timeframe
2.1.1 & 2.1.2	<p>Performance measure: Successfully design the game to ensure distribution through OER and posting on the Wilson Center’s website.</p> <p>Target: Ensure the game is able to meet the needs of both the OER and Wilson Center’s website.</p>	<p>Meetings and coordination with respective stakeholders, including the Washington Office of Superintendent of Public Instruction, educators, game developers, website developers, and others who would need to set technological parameters for this method of distribution.</p> <p>Months 1-8</p>
2.1.3	<p>Performance measure: Posting the game to OER and the Wilson Center’s website.</p> <p>Target: Successful implementation of game to this distribution to ensure it is accessible to ESD 101 and beyond.</p>	<p>Meetings to coordinate implementation and communication around implementation.</p> <p>Months 18+</p>
2.2.1	<p>Performance measure: Coordination across stakeholders to develop a communication plan. A living communication document that is available to partners in ESD 101 to identify modes of action for communication and outreach to ESD 101.</p> <p>Target: Successfully developing a communication plan that can be distributed across partners and stakeholders, with necessary materials to help facilitate a robust outreach method.</p>	<p>Clear communication across stakeholders through meetings, emails, and other internal communication strategies, and the development of an accessible document that can be used to help facilitate outreach. Design and development of any assets needed for distribution.</p> <p>Months 13-17</p>
2.2.2	<p>Performance measure: Educators within ESD 101, educators within Washington State, and potentially beyond implementing the game within their classrooms.</p> <p>Target: Using Google Analytics, tracking at least 100-300 plays within the first month with the majority coming from Washington State.</p>	<p>Outreach and engagement through the implementation of the communication plan, engagement with educators within ESD 101, local journalists, and more.</p> <p>Months 18+</p>

Risk Identified	Risk Analysis (brief assessment of the impact the identified risk could/would have on the project)	Risk Management Plan (plan to minimize the impact that the risk presents to the project and adjustments to be made if the risk transpires)
Loss of planned partnerships, such as ESD 101 or game developer.	Loss of these key partners would set back the project in terms of timeline and assessment, requiring modifications to both the research design, game development timeline, and an overall shift in protocols and implementation.	<p>For loss of ESD 101, this is a low-risk as the team has been active in engaging around this issue; more likely would be barriers to working with the Washington Superintendent’s office or OER team that are beyond core partners. The Wilson Center has engagements with other districts and could pivot to a different locality (such as Baltimore County). ESD 101 was optimal due to its broad distribution and desire to use digital resources, but is not a limitation.</p> <p>Similarly, while a low-risk, for loss of game developer/contractor, the Wilson Center has robust ties to other game studios who could come in at a similar cost and quality.</p>
Low recruitment of experts, educators, and classrooms	<p>Not being able to have quality feedback on the game design, content, and educational materials would set the project back in terms of quality assessment and validity of assumptions.</p> <p>Classroom recruitment would likely impact the quality of the design of the game, largely due to the lack of feedback and data to assess the success of the intervention.</p>	<p>A low n for the advisory board was set in anticipation of the bar needed to be successful; with the Wilson Center’s network and based on past projects, we anticipate far more than these numbers for participation in the project assessment.</p> <p>Similarly, to mitigate the risk of classroom recruitment, we will first use a convenience sample of classrooms (those recommended by partners in ESD 101) and then a snowball sample. This is one of the reasons for the timeline of this portion of the project, spanning several months to get recruits.</p>

<p>A resurgence of COVID-19 which could cause lockdowns, cessation of in-person classroom, etc.</p>	<p>In-person field assessment is the best form of assessment, as it allows researchers to engage with subjects and provide more robust field observation, discussion, and enthusiasm for the project. A virtual analysis is possible, but limits the capacity of researchers to see and engage with students.</p>	<p>Modifications to the research design to mitigate these pitfalls of a virtual research design, such as one-on-one engagement with students to help track play experience or focus group testing with the game design to support observational quality would be implemented, and has been implemented before by the Wilson Center during the pandemic for other game testing.</p>
<p>Difficulties in implementation the technology, specifically access to necessary computers to play the game.</p>	<p>In order to play a digital game, access to computers would be vital for in-classroom testing and prototype testing.</p>	<p>The Wilson Center could work with school districts to import computers, providing access to computer labs, or, for in-person testing, bring computers for the classroom in order to ensure access that way.</p>
<p>Unanticipated failures in design to meet learning goals and objectives, or other needs of target audience</p>	<p>It is possible that, even after iterative testing throughout the prototype development and the feedback from classroom design, that the game is unsuccessful in meeting learning goals – e.g. the majority of students are not impacted.</p>	<p>This risk is mitigated by both the institutional knowledge and experience provided by the Wilson Center in Serious Games and research; Filament Games, an educational game company with years of experience in this field; engagement with educators and disinformation experts from the beginning; and the overall research design that allows for multiple touch points to refine the game protocol.</p> <p>If when we get to the classroom setting the game is unsuccessful, further assessment is part of the process, and feedback from the implementation can be used to improve the design of the game. Testing would be further recommended until learning goals are met.</p>

Elizabeth M. H. Newbury, PhD

Director of the Serious Games Initiative;

Deputy Director of the Science and Technology Innovation Program at

The Woodrow Wilson International Center for Scholars

(b)(6)

1300 Pennsylvania Ave, Washington D.C. 20004

EDUCATION

CORNELL UNIVERSITY

Ithaca, NY

PhD, Communication

2017

Dissertation: The Case of Competitive Video Gaming and Its Fandom: Media Objects, Fan Practices and Fan Identities

Specialty: Game Studies, Audience Studies, Social Construction of Technology, Diversity, New Media Technologies

M.S., Communication

2015

BRYN MAWR COLLEGE

Bryn Mawr, PA

B.A., Anthropology

2007

SELECTED PUBLIC SPEAKING ENGAGEMENTS

"Esports and Games as a Way to Reach and Motivate Students." Science is Cool 6. Moderator. August 5, 2021. Virtual.

"Unleashing the Potential of 'Serious Games.'" Wilson NOW. Invited Speaker. July 1, 2021. Virtual.

"Esports & Education: How HBCUs are Leveling the Field." ED Games Expo. Organizer. June 4, 2021. Virtual.

"Ten Years of the Federal Games Guild (FGG) and the Emergency of Learning Games in Education." ED Games Expo. Organizer. June 3, 2021. Virtual.

"Playing Global Order: Can video games reinforce good behaviors towards a better world?" Think Tank Hub: Think Tank Talk Series. Invited Speaker. June 3, 2021. Virtual.

"Perspectives from the Field: Promising Practices, Bringing in Youth Voices, and the Importance of Games in Children's Lives." Department of Homeland Security's Digital Forum 6. March 8-11. Virtual.

"Geek Out with Government Games." PAX Online. Speaker & Moderator. September 13-21, 2020. Virtual.

"Going the Distance (Learning) with Games." PAX Online. Speaker & Moderator. September 13-21, 2020. Virtual.

"Government Assets to Enrich Educational Experiences & Games." Games for Change. Speaker & Moderator. July 16, 2020. Virtual.

"Next Level Civic Education through Serious Games." *Humor and Games for Social Good Forum* sponsored by World Learning, Digital Communications Network, and the State Department. Invited Speaker. September 6-7, 2019, Yerevan, Armenia.

"Fem-Tech: Breaking the New Glass Ceiling." Panel discussion with Smita Shah, Wilson Center Cabinet Member and Candice Schaefer, Sr. Director of Program and Adult Development for the Girls Scouts of Greater Chicago and Northwest Indiana (GSGCNWI). Event Organizer and Moderator. Chicago, IL: July 16, 2019.

"Agencies of Play: Science Games in the Federal Government." *Games for Change Festival*. Moderator and Panelist. New York, New York: June 18, 2019.

"Esports in K-12: What, Why and How!" *International Society for Technology in Education Conference and Expo*. Panelist. Philadelphia, Pennsylvania: June 23, 2019.

"K12 esports: Motivating students and motivating players." *Badge Summit*. Panelist. Philadelphia, Pennsylvania: June 22, 2019.

"(Video)Game Changers for Creative Student Pathways." *SXSW EDU*. Panelist. Austin, TX: March 4, 2019.

"How Federal Agencies Approach Game Design." *Serious Play Conference*. Panelist. Manassas, Virginia: July 12, 2018.

"#EsportsEDU: Building the K-12 to College #Esports Pipeline." *Games for Change Festival*. Panelist. New York, New York: June, 2018.

"Cutting through the Noise: Engaging the Public in Arctic Science" The Wilson Center. Event Organizer and Moderator. Washington, D.C.: April, 2018.

"Opening Doors in Glass Walls for Women in STEM." The Wilson Center. Washington, D.C: April, 2018.

"From Bytes to Bucks: Soft Power, Policy, Tech, and Culture." The Wilson Center. Event Organizer and Moderator. Washington, D.C: February 2018.

Game Creation Workshop: Together We Weather The Storm. At "Storytelling is Serious Business: Workshop to Strengthen Communication Capacity of Chinese Environmental NGOs." Hosted by the China Environment Forum. Kunming, China: January 2018.

"Education and Competitive Gaming; Why Esports Is Impacting Classrooms" Serious Play Conference. Manassas, Virginia: June 2017.

RECENT LEADERSHIP EXPERIENCE

Federal Games Guild, Co-Chair (2017-Present)

An informal community of practice for federal agencies using, designing, researching and funding games

International Communications Association, Game Studies Division, former Board Member Representative (2011-2015)

Reviewer:

Often called upon to review both games or game-based research proposals both formally and informally, with a particular eye to the pedagogical practices and effectiveness of reaching core audiences.

- Games for Change Festival: 2019, 2020, 2021. Invited Reviewer for "Most Significant Impact" Award.
- Annual Reviewer for: Serious Play Conference, Game-Based Grants for Federal Funding Agencies

SELECTED PUBLICATIONS

Newbury, E. (2021). Esports: Health and Safety at the Collegiate Level. *The Woodrow Wilson International Center for Scholars*.

Newbury, E. (2020). Game-based approaches to research, education and engagement tap a new audience. *FedTech Magazine*.

Newbury, E. (2020). The COVID-19 Cataclysm, or Preparing for Crisis through Games. *Games for Change*.

Bowser, A., Long, A., Meloche, M., Newbury, E., & King, M. (2020). Filling Data Gaps: A Citizen Science Solution. *The Woodrow Wilson International Center for Scholars*.

Newbury, E. (2018). Leveling Up Health: Trends in Games for Health from the Games for Change Festival. *CTRL Forward: A Blog for the Science and Technology Innovation Program*.

Newbury, E. (2016) Fans Just Wanna Have Fun: A Sociology of Sport Approach to eSports in Semi-Public Spaces. Presented at the International Communication Association Conference in Fukuoka, Japan. June 9-13.

Newbury, E. (2016) It's A Game of Pixels: e-Sports and the Potential Benefits for Fans. Presented at Pre-Conference for the Game Studies Division of the International Communication Association Conference in Fukuoka, Japan. June 7.

Newbury, E. (2015) Let's Get It Started: eSports Casting and its Reflection of Gender Norms. Presented at the Association for Internet Researchers Conference in Phoenix, AZ. October 22-25.

Newbury, E., Humphreys, L. & Fuess, L. (2014). Over the Hurdles: Barriers to Social Media Use in Extension Offices. *Journal of Extension*, 52(5), 5FEA1.

Humphreys, L., Gill, P., Krishnamurthy, B., & Newbury, E. (2013). Historicizing New Media: A Content Analysis of Twitter. *Journal of Communication*, 63(3), 413-431.

Newbury, E. (2013) A New Name for the Game: eSports Fans and Spectatorship. Presented at the International Communication Association Conference in London, UK. June 17-21.

Humphreys, L., Gill, P., Krishnamurthy, B. & Newbury, E. (2012) Historicizing New Media: A Content Analysis of Twitter. Presented at the International Communication Association Conference in Phoenix, AZ, May 24-27, 2012.

WORK EXPERIENCE

WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

Washington, D.C.

Deputy Director of the Science and Technology Innovation Program

2021 - Present

- Co-leading the Science and Technology Innovation Program, a program leading the way in the intersection of policy, science, and technology
- Demonstrated impacts in capacity building through the public communication of science, leading outreach and engagement across multiple stakeholder groups from government, NGO, and academia
- Instrumental in supporting the strategic mission of both STIP and the Wilson Center

WOODROW WILSON INTERANATIONAL CENTER FOR SCHOLARS

Washington, D.C.

Director of the Serious Games Initiative

2017 - Present

- Leading the Serious Games Initiative, historically the first educational games program for policy out of a leading transdisciplinary think tank
- Working to bridge the gap between scholars and designers of games through shared workshops, working papers and researcher
- Developing and researching games to engage the public in scientific and policy discourse
- Supporting the broader ecosystem of research and development of serious games through professional capacity building, such as chairing the Federal Games Guild

CORNELL IN WASHINGTON, CORNELL UNIVERSITY

Washington, D.C.

Residential Advisor & Teaching Assistant

2015 - 2017

- Responsible for mentoring students one-on-one as they manage coursework and an independent research project, ranging from history projects to social science projects.
- Ensuring students make learning goals as well as work towards specific project deadlines.
- Built upon program by developing unique, exploratory experiences for students in D.C.

DEPARTMENT OF COMMUNICATION, CORNELL UNIVERSITY

Ithaca, NY

Lecturer and Teaching Assistant

2010 - 2015

- Maintained rigorous standards for learning goals, challenging students to reach beyond their own experience and were engaged in the learning process.
- Used technology to engage students in the classroom, specifically by developing gamified lectures.
- Supported students during their learning, managing a wide variety of crisis by working across departments to ensure that students preserved their mental health throughout the semester.

LAND GRANT FELLOWSHIP, CORNELL UNIVERSITY

Ithaca, NY

Independent Research

2011 - 2013

- Won highly competitive fellowship to research the Cornell Extension's outreach through social media
- Created and executed two year fellowship studying the social media practices, collaborating across departments and with stakeholders
- Surveyed stakeholders/extension offices across New York state to assess current use of social media and barriers to using it, specifically around attitudes and beliefs about social media
- Published findings in the Journal of Extension, and presented findings across New York state
- Provided one-on-one evaluations of social media usage with Extension offices, training staff in effective social media use

INTERNATIONAL COMMUNICATION ASSOCIATE, GAME STUDIES SIG

Graduate Student Representative

2011 - 2015

- Launched and lead use of social media for the Game Studies Special Interest Group (SIG) of ICA. Monitored and update social media sites for the SIG.

CORNELL UNIVERSITY

Ithaca, NY

Research Assistant - HATCH Grant on Twitter and Privacy

2011-2013

- Worked with team of researchers to perform intercept interviews in New York City and rural New York to better understand perceptions of privacy using Twitter. Research was covered under a competitive HATCH grant.
- Coded tweets using content analysis methods to better understand ways users perceive privacy online

Page 38

Withheld pursuant to exemption

(b)(6)

of the Freedom of Information and Privacy Act

Page 39

Withheld pursuant to exemption

(b)(6)

of the Freedom of Information and Privacy Act

Tammie J. Schrader

Education

Gonzaga University, Spokane, WA 2019 – Present
Enrolled in PhD program for Educational Leadership
Dissertation on Teacher Leadership and Educational Policy

Gonzaga University, Spokane, WA 2000-2002
MA in Teaching at Risk Students

Eastern Washington University, Cheney, WA 1994-1998
BA Secondary Education, endorsements: biology, math, general science, special education, CTE, elementary education
BS Biology

Work Experience

Northeast Washington Education Service District 2014-Present
Regional Science and Computer Science Coordinator
Northeast Washington LASER Director
Provide Professional Development around Computer Science and Next Generation Science Standards to support 59 school districts in the North East Region of Washington State. Provide support to all teachers in these districts around implementation and assessment of science standards. Administrate grants as well as provide STEM support to districts and teachers. Provides implementation of Computer Science framework and standards to 59 districts.

Whitworth University 2016 – Present
Adjunct Professor – Undergraduates/Graduates
Teaching Science Methods classes

St. Martin's University 2020 – Present
Adjunct Professor – Undergraduates/Graduates
Teaching Science Methods classes
Teaching Classroom Management classes

Washington State Computer Science Committee 2015-2017
Framework Development

Providing expertise on developing computer science frameworks for K-12 implementation.

Edugaming Conference and Serious Play Conference 2016
Keynote Speaker

Presented the keynote at the conference, speaking about 59 school district, K-12 gamification implementation plans and progress.

White House Tech Jam & White House Game Jam 2014 & 2016
Speaker

Presented to the White House convening's on gamification and its impact on the classroom and how to implement authentic assessments.

Leadership Assistance for Science Education Reform (LASER) Institute 2015-Present
Faculty

Planning, building, and implantation of STEM Leadership Planning for districts across the state of Washington for a 1 week LASER Leadership Institute.

Cheney School District 1999-2014
Math, Science and STEM Teacher – 7th and 8th grades

Teaching biology, genetics, STEM, pre-algebra, algebra, gifted sciences, computers, digital photography and CTE.

Filament Games –National Science Foundation 2013- Present
 Science Curriculum Advisor to Filament Games on their production of science video games for educational classroom use.

Professional Education Standards Board 2013-2019
 Currently work for Governor Inslee on state policy issues concerning education. Recently appointed to the executive committee for the board.

Washington Education Association 2013-Present
 Innovative Jump Start Leader – design and deliver a STEM focused workshop that incorporates and integrates Common Core State Standards and Next Generation Science Standards

Hope Street Group National Teacher Fellow 2013-2014
 Worked on a policy project implementing assessment of curriculum and teacher effectiveness.

America Achieves National Teacher Fellow 2014-2016

Worked on a policy project implementing assessment of curriculum and teacher effectiveness.

Science Assessment Leadership Team 2005-Present

Served on a team of science teachers writing and reviewing the Washington Measurement of Student Progress assessments. This includes the data review and pilot range finding of state assessments.

Department of Energy 2009-2011**Member of Pacific Northwest National Laboratory for Academies Creating Teacher Scientists**

Worked as a summer scientist on current research in the Battelle Northwest National Laboratory. Research included work on finding alternate biological substitutes for the automobile and airline industries.

National Board Facilitator – Gonzaga University 2007-2011

Facilitated National Board Candidates through the process

Classroom Teacher Fellow – Department of Education 2008-2009

Selected along with 19 other teachers nationwide to work on federal policy and classroom implementation.

Eastern Washington University 2003 – 2015**Co-Instructor – Undergraduates/Graduates**

Teaching Earth Science Methods classes

Developed Projects and Curricula

2017 – Present	ASCD STEM Integration of Science Standards
2014 – Present	Innovation and Integration Workshop
2013	Hope Street National Teacher Fellow
2012	Pearson Education, TPA scorer
2010 – Present	Case study with Dr. Matt Marino – Using Educational Video games to improve literacy
2013	Science Item Writing Committee
2012	Science Data Review Committee
2011	Science Standards Committee
2010	Published, Best Practices for Middle School Teachers, Chapter 17

2010 Presentation, National Science Teachers Association Conference,
Philadelphia

Grants Managed

2017 Washington State University STEM Teacher of the Game
2013 OSPI & Centurylink Grant
2012 Washington STEM Entrepreneur Award
2010 US-Russia Language, Technology, Math, and Science Exchange
2008 Classroom Teacher Fellow, Department of Education
2007 ING Unsung Hero Award
2007 Best Buy Technology Award

Professional Affiliations

ASCD
NCCE
International Society for Technology Education
Computer Science Teacher Association
Department of Education
National Board Certificate Facilitator
Washington Science Teachers Association
National Science Teachers Association
National Association of Biology Teachers
Geological Society of America
Washington State Math Association

dan norton

CCO



Dan Norton is a founding partner of Filament Games and leads our game design practice. Dan has designed games on a broad range of topics, ranging from marine turtle ecology to legal argumentation. In his tenure at Filament Games, Dan has overseen the development of more than 200 games for both schools and consumers, including recent commercial VR titles like *Breaking Boundaries* and *Encyclopedia Britannica's VR Explorations*.

skills

Game design

Creative Direction

UI Design

Problem Solving

Critical Thinking

experience

Filament Games, Madison WI

CCO, 2010 - PRESENT

LEAD DESIGNER, 2006 - 2010

Academic ADL Co-Lab, Madison WI

DESIGNER, 2002 - 2005

synergistic activities

NSF SBIR Ph1+2 (RoboCo) Game Designer

2017-Present

ED SBIR Ph1 (Discussion Maker) Game Designer

2015

Joan Ganz Cooney STEM Challenge Winner

2011

CODiE Award for Best Education Game

2010

Appendix C: Documentation of Commitment/Support



May 12, 2022

Dr. Elizabeth M. H. Newbury
One Woodrow Wilson Center Plaza
1300 Pennsylvania Ave NW
Washington, D.C. 20004

Dear Dr. Newbury,

This letter is to express support for the Wilson Center's Serious Games Initiative in developing a digital game on disinformation that can be used within middle school and early high school students in the NorthEast Washington Educational Service District 101 (NEWESD 101) region. NEWESD 101 serves seven counties in the northeast portion of Washington state, and we believe in preparing all our students for success in the 21st century. Unfortunately, this means preparing students to be savvy media consumers and prepare them against disinformation.

It is our experience that educational games create a positive learning experience for our students, causing them to be excited to learn and dive into complex concepts that they may otherwise be hesitant to engage with. With the support of educators, we have actively been working to help create more of these resources for our community and are delighted that one of the leading programs on educational games chose to work with us.

This game, which puts students as the heroes fighting against disinformation, hits on several needs of our district: a digital distribution and a fun way of introducing how to combat disinformation. We are excited that it not only helps students identify tactics used in disinformation to target students, but also illustrates ways that we could all be working together to fight disinformation, is great.

We appreciate the opportunity to collaborate on this project around such a vital topic, and wish the Wilson Center the best of success in this application process.

Sincerely

(b)(6)

Michael Dunn, Ed.D.
Superintendent



5/13/2022

Woodrow Wilson Center
Elizabeth Newbury
1300 Pennsylvania Avenue NW,
Washington, DC 20004

Dear Elizabeth Newbury:

I am expressing our support for the Woodrow Wilson Center's Targeted Violence and Terrorism Prevention grant application.

As your partner, Filament Games ("Filament") commits to providing you with our digital educational game design and development services to create the intervention proposed in the grant. Filament is a digital production studio that focuses exclusively on playful learning that is transformative. Our prime directive is to create inspiring educational experiences that spark imagination and foster deep learning through exploration and discovery. Our success lies in a development process that tightly integrates commercial game techniques with best practices from curriculum design and the learning sciences. As our whole 62-person studio focuses on creating educational games, we have ample experience and expertise to provide the services that have been requested of us while working with subject matter experts in their respective areas of research. Lastly, we bring specific expertise in creating high stakes prevention games such as when we worked with Rowan University on a game to prevent chemical safety incidents, the National Safety Council on a game to prevent motorist accidents, and nSquared on a game to prevent the accumulation of orphaned nuclear matter.

Over the past 17 years, we have built over 200 interactive experiences addressing a wide array of topics. Through these products, and with our partners, we have won a myriad of awards, including SIIA (Software & Information Industry Association) awards for "Best Education Game or Simulation", "Most Likely to Succeed" and "Most Innovative Game", as well as earning "Best Gameplay" finalist at the Games for Change festival. Furthermore, we have successfully completed several SBIR grants through to commercialization with the Department of Education and the National Science Foundation both as a prime and as a sub-awardee so we bring considerable experience with grant programs.

We look forward to collaborating with you to build a highly effective game intervention to target violence and terrorism prevention.

Sincerely,

(b)(6)

Jennifer Javornik
VP, Partnerships and Business Development

Appendix D: Letters of Recommendation

KANSAS STATE
UNIVERSITY

Woodrow Wilson Center
Dr. Elizabeth Newbury
One Woodrow Wilson Plaza
1300 Pennsylvania Avenue NW,
Washington, DC 20004

Dear Dr. Newbury,

I am pleased to write a letter of recommendation for the Wilson Center's Targeted Violence and Terrorism Prevention grant application.

As a scholar of counter violence and extremism, I know that extremist organizations are relying more and more on spreading disinformation to youth – both in the Middle East and in the United States. They are leveraging information technologies to divide and conquer vulnerable populations. Young people who get recruited are often manipulated into believing false narratives that feed righteous anger. Ultimately the purpose of disinformation is to sell violence as the most effective means to arrive at justice. It is critical that young people are taught how to identify the slippery slope of disinformation.

That's why I am strongly supportive of the Wilson Center's Serious Games Initiative's proposal to create a digital learning tool that targets disinformation. When you described how the game will promote understanding about different types of attacks based on case study examples, and most critically, help illustrate the ways in which government, media and industry stakeholders can fight to combat disinformation, I knew this would be a valuable tool. These games would be tremendously helpful not just for the target population in Northeast Washington, but a powerful tool for students across the nation.

I am eager to support this project by providing my expertise. I wish you the best in your application to DHS's Targeted Violence and Terrorism Prevention Program.

Best,

Nadia Oweidat
Assistant Professor of History and Security Studies
Kansas State University

Appendix E: Overhead Justification



United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, DC 20240

Nonprofit Organization Indirect Cost Negotiation Agreement

EIN: (b)(6)

Date: 04/08/2022

Organization:

Woodrow Wilson International Center for Scholars
1300 Pennsylvania Avenue, NW
Washington, DC 20004-3027

Report Number: 2020-0579

Filing Ref.:

Last Negotiation Agreement
dated: 02/09/2022

The indirect cost rates contained herein are for use on grants, contracts, and other agreements with the Federal Government to which Public Law 93-638 and/or 2 CFR Part 200 apply subject to the limitations contained in Section II.A. of this agreement. The rates were negotiated by the U.S. Department of the Interior, Interior Business Center, and the subject organization in accordance with the authority contained in applicable regulations.

Section I: Rate

Start Date	End Date	Rate Type	Name	Rate	Base	Location	Applicable To
10/01/2014	09/30/2015	Final	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To
10/01/2015	09/30/2016	Final	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To
10/01/2016	09/30/2017	Final	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To
10/01/2017	09/30/2018	Final	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To
10/01/2018	09/30/2019	Final	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To
10/01/2019	09/30/2020	Final	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To
10/01/2020	09/30/2021	Provisional	Indirect	16.73 %	(A)	All	Trust Fund Programs
			Name	Rate	Base	Location	Applicable To

(A) **Base:** Total direct costs, less capital expenditures and the portion of subawards in excess of the first \$25,000.

Section II: General

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

Treatment of paid absences: Vacation, holiday, sick leave, and other paid absences are included in salaries and wages and are claimed on grants, contracts, and other agreements as part of the normal cost for the salaries and wages. Separate claims for the costs of these paid absences are not made.

Section II: General

- A. **Limitations:** Use of the rate(s) contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rate(s) agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).
- B. **Audit:** All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation.
- C. **Changes:** The rate(s) contained in this agreement are based on the accounting system in effect at the time the proposal was submitted. Changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rate(s) in this agreement may require the prior approval of the cognizant agency. Failure to obtain such approval may result in subsequent audit disallowance.
- D. **Rate Type:**
 - 1. **Fixed Carryforward Rate:** The fixed carryforward rate is based on an estimate of the costs that will be incurred during the period for which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to the rate for a future period, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.
 - 2. **Provisional/Final Rate:** Within six (6) months after year end, a final indirect cost rate proposal must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.
 - 3. **Predetermined Rate:** A predetermined rate is an indirect cost rate applicable to a specified current or future period, usually the organization's fiscal year. The rate is based on an estimate of the costs to be incurred during the period. A predetermined rate is not subject to adjustment.
- E. **Rate Extension:** Only final and predetermined rates may be eligible for consideration of rate extensions. Requests for rate extensions of a current rate will be reviewed on a case-by-case basis. If an extension is granted, the non-Federal entity may not request a rate review until the extension period ends. In the last year of a rate extension period, the non-Federal entity must submit a new rate proposal for the next fiscal period.

Section II: General (continued)

- F. **Agency Notification:** Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.
- G. **Record Keeping:** Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.
- H. **Reimbursement Ceilings:** Grantee/contractor program agreements providing for ceilings on indirect cost rates or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.
- I. **Use of Other Rates:** If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate(s) in this agreement, the grantee/contractor should credit such costs to the affected programs, and the approved rate(s) should be used to identify the maximum amount of indirect cost allocable to these programs.
- J. **Other:**
 - 1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.
 - 2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate(s) if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.
 - 3. This Negotiation Agreement is entered into under the terms of an Interagency Agreement between the U.S. Department of the Interior and the cognizant agency. No presumption of federal cognizance over audits or indirect cost negotiations arises as a result of this Agreement.
 - 4. Organizations that have previously established indirect cost rates—exclusive of the 10% *de minimis* rate—must submit a new indirect cost proposal to the cognizant agency for indirect costs within six (6) months after the close of each fiscal year.

Section III: Acceptance

Listed below are the signatures of acceptance for this agreement:

By the Nonprofit Organization

By the Cognizant Federal Government Agency

Woodrow Wilson International Center for
Scholars

US Department of State

(b)(6)

Signature

Signature

Sue Howard

Craig Wills

Name:

Name:

Division Chief
Indirect Cost & Contract Audit Division

Deputy Chief Financial Officer

Interior Business Center

Title:

Title:

4/14/2022

4/13/2022

Date

Date

Negotiated by: Muberra Guvenc

Telephone (b)(6)

Next Proposal Due Date: 03/31/2022

Script for Prototype Development with Educators

Please note that we will be using a semi-structured interview design, focusing on the questions below. However, the overall structure of the interview will be to make it a conversational and welcoming experience to the participants; follow-up questions may be asked to clarify points. This script presumes that the activity would take place over Zoom or similar software. At this stage of development, questions focus not only on disinformation, but also on the ease of access of the game, what the player would want to do in the game, and any barriers to the experience.

Briefing [2 min]

Hi! Thanks for coming in today to help us out. My name is [xxxxx]. [If other research assistants are on the call, introduce them as well] I'm going to show you a new game we're working on to help understand disinformation, and options we can take to deflect disinformation. There are no wrong answers, and this interview is completely voluntary. We are looking forward to your feedback on how we can improve this early design.

Session Details [1-2 min]

Just a few things to before we begin:

- May I record the interview? [Yes/No] We won't share the recording with anyone outside of a few people on our internal team; it is for our notes. If we may record, we would like to further protect your privacy by changing your name to a pseudonym in Zoom.
- If you have any questions for me, at any time, let me know. I'll do my best to answer.
- I have a list of pre-written questions. If you'd like to take a look at them, let me know and I'll show you.
- The session should take no more than an hour. If you ever need a break, or want to end the interview at any time, that's fine! Just let me know and we can stop.
-

Does that all sound okay? Do you have any questions before we get started?

[At this point, we will set up the recording if permission is granted]

Warm-Up [2-5 min]

Before I send you the link to the prototype, I have just a few questions. There are no right or wrong answers, but these will help us better understand your experience and how we can improve the game later.

- Do you ever play video games, mobile games, or board games? If so, what are some of your favorites?
- Very briefly, have you heard about disinformation? Have you taught about disinformation?
- Can you tell me a bit about what you know about disinformation attacks? Can you tell me briefly about what you know about how to stop disinformation?
 - How have you generally learned about disinformation? Friends, YouTube, News, Events, Social Media, something else?
 - How important disinformation is to you, and why? Can you rate it on a scale of 1-10, one being not important at all and 10 being extremely important to you.

Character Design Testing [5 min]

First, we're going to take a look at a few of the character designs from the game. As we go through, I would like you to imagine that this is part of a classroom exercise. Think of what your students' reactions would be, and let us know what that might look like.

[Investigator sends links for participant to open, with images of characters]

For each character:

- What three words would you use to describe this character?
- Does anything stand out to you? Is there anything you like or dislike?



To wrap up: Remembering, there is no right or wrong answer; who do you think would play a game with these characters? Why?

Prototype Testing [20 min]

Thank you for that feedback. Now, we're going to play through a prototype of the game. Since this is a prototype, you will not be able to interact fully with everything on screen as you would in the actual game, but you will be able to get a general idea of how the game works. I will send you a link to the game, and we ask that you screenshare. Is that okay?

I'd like you to click through and talk aloud about what you are thinking. At certain points, I may ask you to pause so we can further discuss a point you made or so I can guide you through some of the interactions. If something doesn't make sense to you, you can stop and let me know.

[Investigator sends link to the game, participants screenshare]

[Should there be difficulty with the participant screensharing, we will screenshare the game prototype with the participant from our own computer]

Start Screen: Before we get started, I'm going to ask you some questions about the design.

- Can you describe for me what you see on this screen?
- What do you think about the colors?
- Is there anything you like or dislike about the way this screen looks?
- When you're ready, you can start the game.

Remind if needed: Remember to talk aloud about what you are thinking.

Note for grant committee: Example questions follow, but will shift depending on the actual game play experience.

- What do you think about the game's story so far?
- Can you describe what you see?
- How are you finding the game experience so far?
- Would you be interested in speaking to other characters if you could?
- Can you think of anything else you would like to do in this part of the game?
- Do you see anything else you'd like to click on? Go ahead and do that.
- What do you think you should do next?
 - Note for PI: Explain that if this were the real game, you would have freedom of choice. But for the prototype, we need to speak to them in a specific order.

Dialogue Screens:

For the prototype, I will need to guide you through each response. Before we do that, let's pause and discuss.

For each line: Which response would you pick here? Why?

Outcome:

- Is this the outcome you expected? What do you think of it?
- What do you think will happen next?

Ending Prototype Play

And you made it to the end of the prototype!

- Are you interested to see what happens next?
- Did you learn anything from playing this game? Would your students have learned anything from playing the game?
- How likely are your students to play this game and enjoy it?
- Before we wrap-up, is there anything else you'd like to say?

Wrap-up [2 min]

Thanks so much for meeting with me! The feedback you shared with us will help us improve our game design. If you have any questions after we end here today, please don't hesitate to reach out.

Pre-Survey Design for Classroom Testing in ESD 101

This is an example of a survey design that could be implemented to test the game. There will be some variance once this has been validated by educators, experts, and the informed by the game design itself. Questions are modeled after past studies, including Lin & Zhang (2011) and Pfirman et al. (2020), to inform the length of the survey and the types of questions asked. Per Pfirman, questions should focus on: actual and perceived knowledge of the issue; attitudes and beliefs; impressions of and engagement with the intervention experience.

1. In one sentence, define what disinformation is:
2. Which of these is an example of disinformation:
 - a. [photos from social media]
3. Name three different characteristics of disinformation:
4. How important do you think disinformation is, as an issue facing the US? 1 being not at all important, 5 being extremely important.
5. Name three ways government, media, or industry can help address disinformation?
6. How confident are you that we can stop disinformation? 1 being not at all confident, 5 being extremely confident.
7. Do you have any past experience with playing video games?

Post-Survey/Four Week Survey Design

1. In one sentence, describe what disinformation is:
2. How important do you think disinformation is, as an issue facing the US? 1 being not at all important, 5 being extremely important.
3. Which of these is an example of disinformation:
 - a. [photos from social media, different examples]
4. Name three different characteristics of disinformation:
5. Name three ways government, media, or industry can help address disinformation?
6. How confident are you that we can stop disinformation? 1 being not at all confident, 5 being extremely confident.

Human Subjects Research Compliance Determination Form

5/16/2022

1. Project Title:

Defenders Against Disinformation: A Digital Educational Game

2. Program and/or project under which this effort is performed:

DHS's Targeted Violence and Terrorism Prevention Grant Program

3. Point of Contact:

First and Last Name:	Elizabeth Newbury (Wilson Center) / Kristi Matsunaka (DHS)	
Email Address:	(b)(6)	
Title and Division/Office:	Director of the Serious Games Initiative, Wilson Center / Strategic Engagement Lead, Center for Prevention Programs and Partnerships	
Phone Number:	(b)(6)	

4. This a request for a:

Research Determination Exemption Determination

5. Are any elements of the project classified?

Yes No

Click or tap here to enter text.

6. Is the project being conducted solely in support of functions/components within DHS (i.e., validation of technology for which DHS components are the sole end user):

Yes No

Please list the entities this effort will support:

Click or tap here to enter text.

7. What is the purpose/objective of this effort?

To perform iterative testing on an educational intervention (game) designed to meet the needs of grant deliverables for Fiscal Year 2022 Targeted Violence and Terrorism Prevention Grant Program (DHS-22-TTP-132-00-01). The primary goal is to assess the reliability of the intervention to meet learning objectives around disinformation.

8. Summary of planned activities (e.g., description of the activities, when and where activities will be conducted, and individuals who will host the activities.):

The educational intervention (game) will be tested across sixteen classrooms in NorthEast Washington Educational Service District 101 (ESD 101) during the second year of game development. Feedback from each classroom will be used to refine the game and educational materials. The game will be evaluated in terms of both design and accessibility to the age group, as well as in terms of learning outcomes. While we have planned for travel to Washington State, it is a possibility that these plans may be adapted due to potential COVID restrictions. In this case, the sessions will be held virtually.

A combination of survey design, field observation and debrief will be used to assess the game within the classroom.

Prior to the game play, students will receive instruction on disinformation that primes them for the activity. After the game play, students will be debriefed, with a particular lens towards understanding what the play experience was like for students, what stuck with them about the experience, and assessing attitudinal change.

For the survey design, a reliable method is to use a pre- and post-game survey in order to assess learning outcomes (c.f. Pfirman et al., 2015). Prior to the game, this may include capturing information about how much the students know about disinformation, identifying disinformation, or ways to mitigate disinformation as mapped to the goals. A similar survey can be used after the game play, to assess whether students gained knowledge after the game intervention. Two weeks after the game play, we will also ask educators to distribute a short survey to those students who participated to map longitudinal learning, with similar questions to the pre- and post-survey.

Field observation will triangulate the quantitative analysis of the surveys, focusing on observing students and how they engage with the game during play. This is helpful for capturing reactions throughout the game experience and content, as well as mapping technologically if there are any issues with navigating the game. It will improve the quality of the game by allowing us to have more data on the actual play experience, while the other two methods allow for a pre- and post-analysis.

9. Will members of the public (any individuals outside of DHS or the Federal government) be engaged in the proposed activities?

Yes No

10. Will any participants from vulnerable populations or populations requiring special consideration(s) (e.g., prisoners, pregnant women/neonates, children, socially or financially disadvantaged persons, or persons with physical or mental disabilities) be the focus for involvement in the effort?

***Please note that DHS affords detainees the same additional provisions and considerations*

as a prisoner population when involved in research.

Yes No

11. Description of participants and recruitment procedures:

Example Description: 250 voluntary participants will be recruited from a population of college students and local first responders. Participants will range in age from 18-35 and will consist of both males and females in good physical health.

Recruitment of 16 secondary classrooms in Washington State's ESD 101 district, which would be approximately 320 to 480 students depending on class size. Participants will range in ages 12 to 15 years old and will consist of both males and females. Participation will be voluntary, and permission will be received from the administration, educators, and parents for students to participate following Smithsonian Institution IRB protocol.

12. Will participants be compensated for their involvement in the project?

Yes No

If yes, please provide the type of compensation and when participants will receive it:

Participating classrooms will receive approximately \$50 after field observation takes place, as both a recruitment incentive as well as a way to honor the time of educators. This was not at the request of ESD 101 but is consistent with common practices from the field of education. Participation is still voluntary.

13. Is data being collected or accessed?

Yes No

If so, what type(s) of data will be collected or accessed, will identifiers be provided/recorded with the data, how will the data be stored (i.e., on DHS or non-DHS servers/property), and how data will be used/analyzed (to include individuals who will have access to the analyzed data/final report); i.e., internal review only, publication, presentation of results at a professional meeting, etc.

*If data will be procured from a commercially available source, please provide the name of the source and the type of data-sharing agreement in place:

Data will come from three sources, with the intention of this data to map if learning has taken place,

a) Survey: A pre- and post-intervention survey will be distributed to students in participating classes, to track a baseline of knowledge about disinformation and the impact of the intervention on that baseline knowledge. An example of sample questions can be found in the narrative package. This data will be anonymized, such as using numerical designations for students instead of collecting PII like names. This data will be used to assess if the intervention was successful in improving understanding about disinformation.

b) Field observation: During the intervention, field observation data will be collected to map the experience of the intervention. PII will not be collected, as field observation will focus on collective behaviors (e.g. "students seem to have difficulty with the language at X point in the game"). This data will be used to not only identify potential flaws (or successes) in the game

design, but also to assess if learning goals have been met.
c) Debrief/focus group: Collectively, students will be debriefed after the intervention and further qualitative feedback will be solicited about the experience in a semi-structured focus group manner. PII will not be collected, as with the field observation the focus will be on the feedback and not on individuals (e.g. “students observed that it was fun to play with character X”). This data will be used to not only identify potential flaws (or successes) in the game design, but also to assess if learning goals have been met.

After data collection, qualitative data like field observation and focus group data will be aggregated on a platform, such as Atlas.TI, to map emerging themes from across classrooms. Quantitative data will be run through a different form of analysis, such as ANOVA test. The raw data will only be secured and accessible only by the core team Wilson Center (e.g. Dr. Newbury and her research assistants). Permission slips will be kept separately. Data will be deleted three years post-study.

The aggregate of that data e.g. analysis of this data (which will not include any identifying information) will be shared with the game development team to inform modifications to the game; educators, to solicit feedback on improvements; presentations about the project, such as at educational conferences; and potential publication, such as a peer-reviewed journal or white paper produced through the Wilson Center.

14. Will Personally Identifiable Information (PII) be collected?

Yes No

If so, please list the types of PII that will be collected (i.e., names, date of birth, phone numbers, addresses, etc.):

Click or tap here to enter text.

Application for Federal Assistance SF-424

* 1. Type of Submission:		* 2. Type of Application:		* If Revision, select appropriate letter(s):	
<input type="checkbox"/> Preapplication		<input checked="" type="checkbox"/> New		<input type="text"/>	
<input checked="" type="checkbox"/> Application		<input type="checkbox"/> Continuation		* Other (Specify):	
<input type="checkbox"/> Changed/Corrected Application		<input type="checkbox"/> Revision		<input type="text"/>	
* 3. Date Received:		4. Applicant Identifier:			
<input type="text" value="05/18/2022"/>		<input type="text"/>			
5a. Federal Entity Identifier:			5b. Federal Award Identifier:		
<input type="text"/>			<input type="text"/>		
State Use Only:					
6. Date Received by State:		7. State Application Identifier:			
<input type="text"/>		<input type="text"/>			
8. APPLICANT INFORMATION:					
* a. Legal Name: <input type="text" value="Woodrow Wilson International Center for Scholars"/>					
* b. Employer/Taxpayer Identification Number (EIN/TIN):			* c. Organizational DUNS:		
<input type="text" value="(b)(6)"/>			<input type="text" value="0202974870000"/>		
d. Address:					
* Street1:	<input type="text" value="1300 Pennsylvania Ave. NW"/>				
Street2:	<input type="text"/>				
* City:	<input type="text" value="Washington"/>				
County/Parish:	<input type="text"/>				
* State:	<input type="text" value="DC: District of Columbia"/>				
Province:	<input type="text"/>				
* Country:	<input type="text" value="USA: UNITED STATES"/>				
* Zip / Postal Code:	<input type="text" value="20004-3027"/>				
e. Organizational Unit:					
Department Name:			Division Name:		
<input type="text" value="Science, Tech, Innovation Prog"/>			<input type="text" value="Serious Games Initiative"/>		
f. Name and contact information of person to be contacted on matters involving this application:					
Prefix:	<input type="text" value="Dr."/> ▼	* First Name:	<input type="text" value="Elizabeth"/>		
Middle Name:	<input type="text" value="Marie Howell"/>				
* Last Name:	<input type="text" value="Newbury"/>				
Suffix:	<input type="text"/> ▼				
Title:	<input type="text" value="Director, Serious Games Initiative"/>				
Organizational Affiliation:					
<input type="text" value="Woodrow Wilson International Center for Scholars"/>					
* Telephone Number:	<input type="text" value="(b)(6)"/>	Fax Number:	<input type="text" value="202-691-4001"/>		
* Email:	<input type="text" value="(b)(6)"/>				

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education) ▼

Type of Applicant 2: Select Applicant Type:

▼

Type of Applicant 3: Select Applicant Type:

▼

* Other (specify):

*** 10. Name of Federal Agency:**

US Department of Homeland Security

11. Catalog of Federal Domestic Assistance Number:

97.132

CFDA Title:

Financial Assistance for Targeted Violence and Terrorism Prevention

*** 12. Funding Opportunity Number:**

DHS-22-TTP-132-00-01

* Title:

Fiscal Year 2022 Targeted Violence and Terrorism Prevention Grant Program

13. Competition Identification Number:

Title:

Fiscal Year 2022 Targeted Violence and Terrorism Prevention Grant Program

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Defenders Against Disinformation: Defeating Disinformation with Digital Gaming

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="750,000.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="750,000.00"/>

* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)

Yes No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative:

* Date Signed: 17-May 2022

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* APPLICANT'S ORGANIZATION

Woodrow Wilson International Center for Scholars

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Mr. * First Name: Mark Middle Name:

* Last Name: Green Suffix:

* Title: President and CEO

* SIGNATURE: (b)(6)

* DATE: 18-May 2022

EMW-2022-GR-APP-00081

Application Information

Application Number: EMW-2022-GR-APP-00081

Funding Opportunity Name: Fiscal Year (FY) 2022 Targeted Violence and Terrorism Prevention (TVTP)

Funding Opportunity Number: DHS-22-TTP-132-00-01

Application Status: Pending Review

Applicant Information

Legal Name: Woodrow Wilson International Center for Scholars

Organization ID: 23961

Type: Nonprofit having 501(c)(3) status with IRS, other than institutions of higher education

Division: Science and Technology Innovation Program

Department: Serious Games Initiative

EIN: (b)(6)

EIN Shared With Organizations:

DUNS: 020297487

DUNS 4: 0000

Congressional District: Congressional District 98, DC

Physical Address

Address Line 1: One Woodrow Wilson Plaza

Address Line 2: 1300 Pennsylvania Ave NW

City: Washington

State: District Of Columbia

Province:

Zip: 20004-3027

Country: UNITED STATES

Mailing Address

Address Line 1: One Woodrow Wilson Plaza

Address Line 2: 1300 Pennsylvania Ave NW

City: Washington

State: District Of Columbia

Province:

Zip: 20004-3027

Country: UNITED STATES

SF-424 Information

Project Information

Project Title: Defenders Against Disinformation: Defeating Disinformation with Digital Gaming

Program/Project Congressional Districts: Congressional District 98, DC

Proposed Start Date: Sat Oct 01 00:00:00 GMT 2022

Proposed End Date: Mon Sep 30 00:00:00 GMT 2024

Areas Affected by Project (Cities, Counties, States, etc.): DC-All

Estimated Funding

Funding Source	Estimated Funding (\$)
Federal Funding	\$750000
Applicant Funding	\$0
State Funding	\$0
Local Funding	\$0
Other Funding	\$0
Program Income Funding	\$0
Total Funding	\$750000

Is application subject to review by state under the Executive Order 12373 process? Program is not covered by E.O. 12372.

Is applicant delinquent on any federal debt? false

Contacts

Contact Name	Email	Primary Phone Number	Contact Types
Sue Howard	(b)(6)		Secondary Contact
Elizabeth Newbury			Primary Contact Authorized Official Signatory Authority

SF-424A

Budget Information for Non-Construction Programs

Grant Program: Targeted Violence and Terrorism Prevention Grant Program

CFDA Number: 97.132

Budget Object Class	Amount
Personnel	\$267679
Fringe Benefits	\$69163
Travel	\$3746
Equipment	\$0
Supplies	\$1120
Contractual	\$300000
Construction	\$0
Other	\$800
Indirect Charges	\$107492
Non-Federal Resources	Amount
Applicant	\$0
State	\$0
Other	\$800
Income	Amount
Program Income	\$0

How are you requesting to use this Program Income? [\$budget.programIncomeType]

Direct Charges Explanation:

Indirect Charges explanation: 16.73 % per NICRA Agreement

Forecasted Cash Needs (Optional)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Federal	\$	\$	\$	\$
Non-Federal	\$	\$	\$	\$

Future Funding Periods (Years) (Optional)

First	Second	Third	Fourth
\$	\$	\$	\$

Remarks:

SF-424C

Budget Information for Construction Programs

Assurances for Non-Construction Programs

Form not applicable? false

Signatory Authority Name: Elizabeth Newbury

Signed Date: Wed May 18 20:50:44 GMT 2022

Signatory Authority Title: Director, Serious Games Initiative

Certification Regarding Lobbying

Form not applicable? false

Signatory Authority Name: Elizabeth Newbury

Signed Date: Wed May 18 00:00:00 GMT 2022

Signatory Authority Title: President and CEO

Disclosure of Lobbying Activities

Form not applicable? true

Signatory Authority Name: Elizabeth Newbury

Signed Date:

Signatory Authority Title: