

To: Dr. Brewer

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Subject: DHS Test Plan

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School Safety Project Test Plan

Purpose

The purpose of this test plan is to provide our team with detailed information regarding our strategy, objectives, resources required, schedule, and deliverables involved with this usability test. It will serve as a point of reference throughout the entire process of our testing of the Department of Homeland Security's (DHS) School Safety website, and will help keep our team on track, as well as prevent the team from straying away from our overall goal.

Problem Statement and Test Objectives

Schoolsafety.gov, a website run by the DHS, is an online resource dedicated to helping school administrators and emergency managers prepare for potential emergency situations in schools. The site contains information on a wide range of potential situations and includes action plans to both prevent and respond to situations. As one can see, this website offers an excellent service to anyone who works with a school.

As schoolsafety.gov is such an important resource, it is imperative that the website is easy to use, well-designed, and highly functional. Our team has been asked to develop and execute a test that will determine how usable the website is for one of its primary demographics. This test will be administered remotely to five to six members of our target demographic with team members observing each test. Data from each test will be compiled and analyzed before being reported to the client along with any recommendations the team may have.

The test will consist of a list of tasks for each user to complete. This task list has been created by members of the team to test two main aspects of the website: the design and the functionality. Tasks that test the design will seek to determine whether the site has an easy-to-learn layout that follows standard internet conventions. Functionality-related tasks will test whether features of the website work the way that they should and ensure that there are not any existing bugs. These two types of tasks will help our team determine the

overall experience that an average user has on the site and allow DHS to provide their users with the best overall product.

Methodology

Due to recent developments of the COVID-19 pandemic, and in order to still effectively identify improvements for DHS's School Safety site, we have decided to conduct a remote usability test that will include a pre-test and post-test questionnaire, and reaction cards.

User Profiles

In studying a specific group of participants, we have constructed a user profile to aid us in recruiting those users.

5 - 6 people (+1 for pilot)

We prefer five participants but will accept a sixth in the case of an emergency. A small user group is beneficial when assessing specific segments of a larger product as results tend to be more concentrated.

40+ year olds

For these tests, we plan on using adults older than 40. Our client stated that the website is generally used by DHS professionals and employees. So, assuming that those users are experienced adults, we believe that this age group best represents the potential users.

Non-users or little experience with schoolsafety.gov

The purpose of this usability study is to record general usability errors that may sway users from returning to the platform. If we recruit experienced users, they will be accustomed to the system's errors and know how to navigate the app. This will not provide us with a realistic simulation of a new user. Therefore, participants with little to no experience is a necessity.

Participant Incentive

Since this usability test will be remote, and since a lot of U.S citizens are in quarantine for the next few weeks, we will probably not need to have any incentive for our test subjects.

Screeners

To recruit participants, we have drafted screeners or application forms. The screener material includes general information (name, email address, cell phone number) and user profile information that decides if an applicant qualifies. This form will be issued both electronically and physically. If applicants fit our requirements, our project team will select

the participants that best fit and proceed with the study. Our Full screener can be found in Appendix B.

Scenarios & Tasks

Findability of schoolsafety.gov

Your child has consistently told you about a disturbance at school. This particular day, they are crying as they arrive home. You have already contacted the school's administrators, but they have offered no solution.

1. From Google, search and find the School Safety website

Homepage Layout

You have heard of schoolsafety.gov but are not sure of its purpose and functions. You would like to explore options for dealing with the reoccurring issue.

1. Scan the website and find the "About" page
2. Find a Guidance resource
3. Find resources related to School climate
4. Find upcoming SchoolSafety related events
5. Find the stop the bleed virtual training program
6. Use the search bar to search for the School bullying prevention page

Safety Readiness Tool

You receive a call from a representative of School Safety. You voice your troubles, and they recommend using the Safety Readiness Tool for further actions.

1. Find the Safety Readiness Tool
2. Take the School Safety Action Plan assessment

Evaluation Methods

For this usability test we have a few methods that will be utilized to evaluate our test and data. We will be evaluating the screeners on their ability to navigate the site. We will be conducting a pre-test questionnaire as well as a post-task questionnaire and reaction cards.

Pre-test questionnaire: This document will ask the participants a few questions related to the test such as their prior experience with the website and other related questions, so that we can gauge if they are a newcomer to the site or not, and what their overall prior experience is. (Located in Appendix C)

Post-Tasks questionnaire: This document will serve as a way for us to get some extra information from our participants such as how their overall experience was, which tasks they personnel did not enjoy, and for participants to gather their overall thoughts about the website. (Located in Appendix D)

Post-test reaction cards: This method provides the participants with descriptive words such as clean, distracting, intuitive. These words would then be paired up with a specific category related to the site or the test, and they can rate them based on a positive, negative, or neutral standpoint. (Located in Appendix E)

We will also determine whether the terminology and screens are easy to comprehend. We will also spend time discussing ways to improve the terminology and screens. We will determine whether some tasks are too difficult and if they need to be streamlined. Then we will construct a questionnaire that patrons may commonly have about the use of the school safety site. After the usability testing concludes we will need to take the data we acquired and make it into quantitative data that we can present to DHS. By using Quesenbery's 5 E's of usability (Effective, Efficient, Engaging, Error-tolerant, Easy to learn) we can sort our data into each category, and then work on narrowing them down to the most important problems that hindering the School Safety website from being the most effective that it can be.

To incorporate quantifiable data into our reports, we will also closely monitor each test's metrics. This data will include time-on-task, successes, failures, and recoveries. Each metric will be gathered as the team examines the test transcripts. With this data, specific target areas can be highlighted and potentially improved.

Test Environment and Equipment

The remote tests will be conducted through zoom. All members of the team will be presenting in the meeting, with only the test moderator's webcam being on. All other members will be muted in to ensure zero distractions for the test subjects. The subjects will be using their personal computers, and we will be able to see both the subjects, and their computer screens. We will be recording each meeting so we can use them as points of reference, as well as having team members log important information from the tests.

Deliverables

Upon completion of testing, our results will be compiled onto a PowerPoint deck and formally compiled into a written report. We will then present our PowerPoint to DHS, and turn our written report into them. Results may include areas in which the product excels,

areas in which users struggled, or bugs that were found within the product. Our team will suggest ways to improve the product, but the primary aim of the project is to simply observe and take note of how end-users use the product.

Appendix A: Script

Script

- (Before anything)
 - Complete Screener Questions in email
- Welcome and thank the user for joining us and taking time out of their day to assist with our research.
- Mention that we will be reading from a script to ensure all users are provided equal information.
- Get user to read and sign disclosure form in email
- Mention that if at any time they would like to take a small break or stop completely, that they may.
- The total testing time should take around 45 minutes to an hour
- First, we would like them to take a quick pre-test survey found in email
- Introduce and practice think out loud protocol

Beginning of Scenarios

Scenario 1: Your child has consistently told you about a disturbance at school. This particular day, they are crying as they arrive home. You have already contacted the school's administrators, but they have offered no solution.

Task 1: From Google, search and find the School Safety website

- Have them answer question 1 of post-task questionnaire

Scenario 2: You have heard of schoolsafety.gov but are not sure of its purpose and functions. You would like to explore options for dealing with the reoccurring issue.

Task 1: Scan the website and find the "About" page

- Have them answer question 2 of post-task questionnaire

Task 2: Find a Guidance resource

- Have them answer question 3 of post-task questionnaire

Task 3: Find resources related to School climate

- Have them answer question 4 of post-task questionnaire

Task 4: Find upcoming SchoolSafety related events

- Have them answer question 5 of post-task questionnaire

Task 5: Find the stop the bleed virtual training program

- Have them answer question 6 of post-task questionnaire

Task 6: Use the search bar to search for the School bullying prevention page

- Have them answer question 7 of post-task questionnaire

Scenario 3: You receive a call from a representative of School Safety. You voice your troubles, and they recommend using the Safety Readiness Tool for further actions.

Task 1: Find the Safety Readiness Tool

- Have them answer question 8 of post-task questionnaire

Task 2: Take the School Safety Action Plan assessment

- Have them answer question 9 of post-task questionnaire

End of Scenarios

- Let participant know they have finished the test
- Ask them to do post test questions found in email
- Thank the participant for everything!

Appendix B: Screener Questions (Google Form)

Screener Questions

Introduction:

The purpose of this questionnaire is to gather background information and narrow down candidates for this usability study.

This usability study will be assessing how easy it is for high school students to use a certain website. User data will be gathered through several methods, including a video recording of the usability test, and will be used to update and/or redesign the website so that it is the best product for the end-user.

Candidate:

Name: _____

Age: _____

Questions:

Question 1: Are you a Georgia resident (y/n)? _____

Question 2: Do you have access to a computer in your home (y/n)? _____

Question 3: How much time do you spend on the internet daily (circle)?

- <1 hour
- 1-3 hours
- 3 or more hours

Question 4: Do you have children (y/n)? _____

Appendix C: Pre-Test Questionnaire (Google Form)

Pre-test Questions

Name: _____

Age: _____

1. How often do you use government websites?
 - a. Regularly
 - b. Semi-often
 - c. Rarely
 - d. Never

2. How often do you contact your local school's administration?
 - a. Regularly
 - b. Semi-often
 - c. Rarely
 - d. Never

3. Have you ever used the School Safety website? (circle one)
Yes No

4. If yes, how often? _____

Appendix D: Post-Task Questionnaire (Google Form)

Post-task Questions

1. Rate your experience with this task

Straightforward

Neutral

Difficult

2. What portion of the task did you least enjoy?

3. What portion of the task did you most enjoy?

4. Do you have any other comments good or bad about the overall website?

Appendix E: Post-Test Reaction Cards (Google Form)

Word Pool

- Undesirable
- Clean
- Convenient
- Distracting
- Inconsistent
- Intuitive
- Not Valuable
- Organized
- Overwhelming
- Responsive
- Rigid
- Stimulating
- Stressful
- Straightforward
- Time Consuming
- Unattractive
- Irrelevant
- Complex
- Efficient
- Professional

Appendix F: Usability Test Legal Disclosure Form

Usability Test Legal Disclosure Form

Purpose: You have been asked to participate in a usability study of the Schoolsafety.gov, a website run by the DHS website. The website is in the process of being re-designed to make it more user-friendly. Your participation in this study is voluntary and without payment of compensation. The study will provide information used to guide the redesign process.

Test Environment: The test will be conducted remotely due to the Corona Virus outbreak..

Information Collected: We will ask you to perform a series of simple tasks or walk you through some various scenarios related to the Web site. We will ask you questions and ask you to fill out short questionnaires. We may record your words and images as you work. The information you provide will be considered confidential, used only for the University's internal purposes, and shared only among the project's affiliates.

Photography & Voice: You may be photographed or taped as you work during the test.

Recorder Waiver: By signing this form, you give consent for your voice, statements, and images to be used in this evaluation of the site and for analyzing the results of the test.

Comfort: You may take a break any time you wish. Inform the test administrator of your desire to do so.

Freedom to Withdraw: You may withdraw from the study at any time.

Freedom to Ask Questions: If you have questions, you may ask the administrator now or at any time during the study.

If you agree with these terms, please indicate your acceptance by signing below:

Signature:	
Printed Name:	
Date:	

Appendix G: Team Checklist

Moderator's Checklist

Before participant arrives

- Make sure product is loaded properly and ready for first scenario
- Make sure phone and microphone are properly positioned

Welcome

- Introduce yourself, thank participant for having an interest in participating

Consent form, pre-test questionnaire, instructions

- Explain the purpose of the test
- Go over consent form, allow time to read and sign; if this has been done already, ask participant if he/she is comfortable with being recorded
- Explain that there are observers who are very interested in learning from the participant about his/her experience
- Ask for questions, concerns
- Give pre-test questionnaire

Instructions

- Explain the process of using scenarios, one at a time, while participant thinks out loud
- Review how think-out-loud process works, with examples
- Explain that after each task, there will be a quick questionnaire to complete, then the next task

After each task, post-task questionnaire

- Offer plenty of reassurance, especially when tasks prove difficult
- Give feedback on the quality of the think-out-loud procedure; if necessary, encourage more feedback from participant by reviewing the process again, with examples
- Ask participant to clarify any thoughts or actions as requested by team members
- Give post-task questionnaire to participant
- Set up product at starting point for next scenario, if needed

After completion, post-test reaction cards

- Give post-test reaction cards
- If appropriate, introduce participant to team; generously thank for experience
- Thank participant for time

Logger's Checklist

Before the test

- Turn on logging computer
- Review logging codes in logging software

- Enter new test information into logging software
- Check headphones and microphones for logger and team
- Test logging software
- Check logger's monitor
- Change monitor views as necessary
- Do a test print from logging software; troubleshoot any problems:
- Check cable from logging computer to printer
- Check paper and ink in printer
- Do a test copy in copier; troubleshoot any problems:
- Check paper in copier
- Check toner cartridge

After each participant

- Print log file
- Copy log file for team members
- Distribute copies to team members
- Place original in participant's folder
- Set up logging software for next participant (if any)

At end of day

- Back up logging software data files
- Set logging software for next day (if appropriate)
- Turn off computer
- Turn off printer
- Turn off copier

Technician's Checklist

Before each test participant arrives

- Turn on equipment
- Adjust cameras to proper settings for recording
- Select picture-in-picture setting for recording
- Check sound coming into and out of the control room

During each test session

- Synchronize starting times with the logger/data recorder
- Adjust audio in control room and headsets as needed
- Change picture-in-picture settings as needed

After the test participant leaves

- Finalize recording
- Prepare for next participant (if appropriate)
- Turn off equipment (at end of last session)