

UT iSchool Usability Test: Austin Humane Society Website

Usability Test Plan

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Table of Contents

Document Overview.	3
Executive Summary.	3
Methodology.	3
Participants	4
Training.	4
Procedure.	4
Roles	5
Facilitator	5
Data Logger	6
Test Observers	6
Ethics	6
Usability Tasks	6
Task Description	6
Usability Metrics	7
Scenario Completion.	7
Critical Errors	7
Non-critical Errors	7
Subjective Evaluations	7
Scenario Completion Time (time on task)	8
Usability Goals	8
Completion Rate.	8
Error-free rate.	8
Time on Task (TOT)	8
Subjective Measures	8
Problem Severity.	8
Impact	9
Frequency.	9
Problem Severity Classification.	9
Reporting Results	9

Document Overview

This document describes a test plan for conducting a usability test and heuristic evaluation of <http://www.austinhumanesociety.org/>. The goals of usability testing include establishing a baseline of user performance, establishing and validating user performance measures, and identifying potential design concerns to be addressed in order to improve the efficiency, productivity, and end-user satisfaction.

The usability test objectives are:

To determine design inconsistencies and usability problem areas within the user interface and content areas. Potential sources of error may include:

- Navigation errors – failure to locate functions, excessive keystrokes to complete a function, failure to follow recommended screen flow.
- Presentation errors – failure to locate and properly act upon desired information in screens, selection errors due to labeling ambiguities.
- Control usage problems – improper toolbar or entry field usage.

Exercise the application or web site under controlled test conditions with representative users. Data will be used to assess whether usability goals regarding an effective, efficient, and well-received user interface have been achieved.

Establish baseline user performance and user-satisfaction levels of the user interface for future usability evaluations.

The user groups that <http://www.austinhumanesociety.org/> is geared toward include people searching for pets and those wishing to volunteer or donate to the organization. The user groups participating in the usability test of <http://www.austinhumanesociety.org/> will include individuals who have searched for a pet, are actively searching for a pet, or will search for a pet in the future. The members of this user group will primarily be comprised of our colleagues in INF385P and we expect to test six to nine individuals. The heuristic evaluation portion of our testing will be conducted by Matthew Cepeda, Allyssa Guzman, and Jessica May. Heuristic evaluations will take place in settings of our choosing but our usability testing with participants will occur primarily within the usability lab or in the usability classroom. Testing is expected to occur between April 8th and April 22nd.

Executive Summary

The functions that will be evaluated on <http://www.austinhumanesociety.org/> include adopting a pet, volunteering, donating, and visiting the Austin Humane Society store and purchasing an item. The overall usability goals will be to identify pain points and determine potential usability problems within the “golden path” tasks users undertake

when visiting the Austin Humane Society website. Heuristic evaluations will be used to assess the overall usability of the entire <http://www.austinhumanesociety.org/> website.

Upon review of this usability test plan, including the draft task scenarios and usability goals for <http://www.austinhumanesociety.org/>, documented acceptance of the plan is expected.

Methodology

The total number of participants for this usability test will be determined by the results of the pre-survey to be administered to potential participants and the amount of volunteers we are able to recruit. We expect to complete this usability test with a minimum of at least six individuals.

The usability test sessions will take place primarily in UTA 1.208 and UX Lab but we are open to working in any available classroom(s) in the UTA building. The users will be using laptops, tablets, and desktops along with Chrome, iOS, and Firefox browsers to interact with the Austin Humane Society website. During the course of the usability test we will be measuring task completion rates, task time, ease of task, scenario completion rate, critical errors, and non-critical errors.

Heuristic evaluations will be conducted using Nielsen's ten heuristics as a guide for assessing the usability of the site. Heuristic evaluations will occur at random intervals between now and the conclusion of our usability test with participants

Participants

The expected number of participants will be six to eight individuals and will be recruited by soliciting volunteers and identifying key demographics isolated by our pre-test survey. In order to be a participant in this usability test, an individual must be competent with conventional browser interfaces and be familiar with completing tasks involving multiple steps.

The participants' responsibilities will be to attempt to complete a set of representative task scenarios presented to them in as efficient and timely a manner as possible, and to provide feedback regarding the usability and acceptability of the user interface. The participants will be directed to provide honest opinions regarding the usability of the application, and to participate in post-session subjective questionnaires and debriefing.

The only concrete requirements needed to participate in this usability test are those of competence with conventional browsers and familiarity with completing tasks with multiple steps. Due to the nature of the tasks to be performed we welcome all potential participants with a range of experience, interest, and skills related to the Austin Humane Society.

Training

The participants will receive an overview of the usability test procedure, equipment and software.

Procedure

Usability Lab Testing

Participants will take part in the usability test at the School of Information UX Lab in the University of Texas Administration Building located at 1616 Guadalupe. A PC with the Web site/Web application and supporting software will be used in a typical office environment. The participant's interaction with the Web site/Web application will be monitored by the moderator seated in the same office. Note takers and data logger(s) will monitor the sessions in observation room, connected by a one way mirror.

The moderator will brief the participants on the Web site/Web application and instruct the participant that they are evaluating the application, rather than the moderator evaluating the participant. Participants will sign an informed consent that acknowledges: the participation is voluntary, that participation can cease at any time, and that the session will be videotaped but their privacy of identification will be safeguarded. The moderator will ask the participant if they have any questions.

Participants will complete a pretest demographic and background information questionnaire. The moderator will explain that the amount of time taken to complete the test task will be measured and that exploratory behavior outside the task flow should not occur until after task completion. At the start of each task, the participant will read aloud the task description from the printed copy and begin the task. Time-on-task measurement begins when the participant starts the task.

The moderator will instruct the participant to 'think aloud' so that a verbal record exists of their interaction with the Web site/Web application. The note-taker will observe and enter user behavior, user comments, and system actions. The time-keeper will measure and record how long it takes the user to perform each task.

After each task, the participant elaborate on the task session with the moderator. After all task scenarios are attempted, the participant will complete the post-test satisfaction questionnaire.

Roles

The roles involved in a usability test are as follows. An individual may play multiple roles and tests may not require all roles.

Moderator

- Provides overview of study to participants
- Defines usability and purpose of usability testing to participants
- Assists in conduct of participant and observer debriefing sessions
- Responds to participant's requests for assistance

Data Logger

- Records participant's actions and comments

Test Observers

- Silent observer
- Assists the data logger in identifying problems, concerns, coding bugs, and procedural errors
- Serve as note takers
- Times length it takes user to complete tasks

Ethics

All persons involved with the usability test are required to adhere to the following ethical guidelines:

- The performance of any test participant must not be individually attributable. Individual participant's name should not be used in reference outside the testing session.
- A description of the participant's performance should not be reported to his or her manager.

Usability Tasks

The usability tasks were derived from test scenarios developed with the assistance of a subject-matter expert (in this case, this included group members who have volunteered with animal shelters). Due to the range and extent of functionality provided in the application or Web site, and the short time for which each participant will be available, the tasks are the most common and relatively complex of available functions. The tasks are identical for all participants of a given user role in the study.

The tests will be carried out on the current working Austin Humane Society website. Users will be presented with the homepage of the website in a web browser on either a PC or a tablet and asked to complete the tasks described below. These tasks were selected based on the main reasons why a user might visit the Humane Society's website, adopting a pet, volunteering, and donating money. As the site is live and not a prototype, there are no special considerations to make concerning development.

The task descriptions below are required to be reviewed by the application owner, business-process owner, development owner, and/or deployment manager to ensure that the content, format, and presentation are representative of real use and substantially evaluate the total application. Their **acceptance is to be documented** prior to usability test.

Task Description

Task 1: Adopting a pet

You would like to adopt a small dog from the Austin Humane Society. The age and breed of the pet are up to you. Using the Austin Humane Society website that is open in front of you, find a small dog that you would like to adopt, determine how much it would cost to adopt that dog, and how the adoption process works.

Goal: Navigate to the Adopt page and select "Dogs," or use the dropdown menu to select "Dogs." Find a dog in the list that is labeled "small." Locate the adoption fee on the dog's profile by clicking on the dog's name or image. Then, navigate to the "Adoption Process" page and learn about the steps for adopting (filling out paperwork, meeting the animal, etc.).

Task 2: Volunteering

You are interested in volunteering for Austin Humane Society. You love cats and so you know that you'd like to work with them. Using the Austin Humane Society website, find out what volunteer opportunities you would have to work with cats, and how you can get started as a volunteer including where to go and when you can start.

Goal: Navigate to the volunteer page. Select "How To." Select either "Cat Volunteer" or "Feral Cat Clinic" volunteer. Read the accompanying pdf to find out what roles the volunteer plays. Then locate the next Orientation time and navigate to the beginning of the sign-up process.

Task 3: Donating

You have \$100 that you would like to give to the Austin Humane Society. Find out how they will use the money that you are giving them. Then use the website to submit your donation, up to the point where you would submit the form. Do not enter your credit card information.

Goal: Navigate to "Give"> "Donate" or use the dog tag at the top right of the navigation bar to navigate to "Donate." Read the sidebar on the right side of the page that explains how much the shelter can do with each level of donation information. Fill out the form to donate \$100 (minus credit card information).

Task 4: Dropping off a pet

You found a stray cat and your apartment complex does not allow pets. Please use the Humane Society's website to learn about how you can put the cat up for adoption. How long will the cat be at the shelter? Is Austin Humane Society a no-kill shelter?

Goal: Navigate "Animal Services" > "Animal Intake." Either determine from that page that it is better to contact Austin Animal Shelter for that service, or learn about sending in an email about the animal to be surrendered. Navigate to the "About" page to learn that the shelter is no-kill. Use the "FAQ" page to learn that animals usually stay at the shelter for two weeks.

Usability Metrics

Usability metrics refers to user performance measured against specific performance goals necessary to satisfy usability requirements. Scenario completion success rates, adherence to dialog scripts, error rates, and subjective evaluations will be used. Time-to-completion of scenarios will also be collected.

Scenario Completion

Each scenario will require, or request, that the participant obtains or inputs specific data that would be used in course of a typical task. The scenario is completed when the participant indicates the scenario's goal has been obtained (whether successfully or unsuccessfully) or the participant requests and receives sufficient guidance as to warrant scoring the scenario as a critical error.

Critical Errors

Critical errors are deviations at completion from the targets of the scenario. Obtaining or otherwise reporting of the wrong data value due to participant workflow is a critical error. Participants may or may not be aware that the task goal is incorrect or incomplete.

Independent completion of the scenario is a universal goal; help obtained from the other usability test roles is cause to score the scenario a critical error. Critical errors can also be assigned when the participant initiates (or attempts to initiate) an action that will result in the goal state becoming unattainable. In general, critical errors are unresolved errors during the process of completing the task or errors that produce an incorrect outcome.

Non-critical Errors

Non-critical errors are errors that are recovered from by the participant or, if not detected, do not result in processing problems or unexpected results. Although non-critical errors can be undetected by the participant, when they are detected they are generally frustrating to the participant.

These errors may be procedural, in which the participant does not complete a scenario in the most optimal means (e.g., excessive steps and keystrokes). These errors may also be errors of confusion (ex., initially selecting the wrong function, using a user-interface control incorrectly such as attempting to edit an un-editable field).

Noncritical errors can always be recovered from during the process of completing the scenario. Exploratory behavior, such as opening the wrong menu while searching for a function, will be coded as a non-critical error.

Subjective Evaluations

Subjective evaluations regarding ease of use and satisfaction will be collected via questionnaires, and during debriefing at the conclusion of the session. The questionnaires will utilize rating scales.

Scenario Completion Time (time on task)

The time to complete each scenario, not including subjective evaluation durations, will be recorded.

Usability Goals

The next section describes the usability goals for <http://www.austinhumanesociety.org/>.

Completion Rate

Completion rate is the percentage of test participants who successfully complete the task without critical errors. A critical error is defined as an error that results in an incorrect or incomplete outcome. In other words, the completion rate represents the percentage of participants who, when they are finished with the specified task, have an "output" that is correct. Note: If a participant requires assistance in order to achieve a correct output then the task will be scored as a critical error and the overall completion rate for the task will be affected.

A completion rate of 100% is the goal for each task in this usability test.

Error-free rate

Error-free rate is the percentage of test participants who complete the task without any errors (critical **or** non-critical errors). A non-critical error is an error that would not have an impact on the final output of the task but would result in the task being completed less efficiently.

An error-free rate of 80% is the goal for each task in this usability test.

Time on Task (TOT)

The time to complete a scenario is referred to as "time on task". It is measured from the time the person begins the scenario to the time he/she signals completion.

Subjective Measures

Subjective opinions about specific tasks, time to perform each task, features, and functionality will be surveyed. At the end of the test, participants will rate their satisfaction with the overall system. Combined with the interview/debriefing session, these data are used to assess attitudes of the participants.

Problem Severity

To prioritize recommendations, a method of problem severity classification will be used in the analysis of the data collected during evaluation activities. The approach treats problem severity as a combination of two factors - the impact of the problem and the frequency of users experiencing the problem during the evaluation.

Impact

Impact is the ranking of the consequences of the problem by defining the level of impact that the problem has on successful task completion. There are three levels of impact:

- High - prevents the user from completing the task (critical error)
- Moderate - causes user difficulty but the task can be completed (non-critical error)
- Low - minor problems that do not significantly affect the task completion (non-critical error)

Frequency

Frequency is the percentage of participants who experience the problem when working on a task.

- High: 25% or more of the participants experience the problem
- Moderate: 12.5% - 25% of participants experience the problem
- Low: 12.5% or fewer of the participants experience the problem

Problem Severity Classification

The identified severity for each problem implies a general reward for resolving it, and a general risk for not addressing it, in the current release.

Severity 1 - High impact problems that often prevent a user from correctly completing a task. They occur in varying frequency and are characteristic of calls to the Help Desk. Reward for resolution is typically exhibited in fewer Help Desk calls and reduced re-development costs.

Severity 2 - Moderate to high frequency problems with moderate to low impact are typical of erroneous actions that the participant recognizes needs to be undone. Reward for resolution is typically exhibited in reduced time on task and decreased training costs.

Severity 3 - Either moderate problems with low frequency or low problems with moderate frequency; these are minor annoyance problems faced by a number of participants. Reward for resolution is typically exhibited in reduced time on task and increased data integrity.

Severity 4 - Low impact problems faced by few participants; there is low risk to not resolving these problems. Reward for resolution is typically exhibited in increased user satisfaction.

Reporting Results

The Usability Test Report will be provided at the conclusion of the usability test. It will consist of a report and/or a presentation of the results; evaluate the usability metrics against the pre-approved goals, subjective evaluations, and specific usability problems and recommendations for resolution. The recommendations will be categorically sized by development to aid in implementation strategy. The report is anticipated to be delivered to Dr. Randolph Bias by April 1, 2015.