

Usability Test Plan

Docutek ERes v. 5.0.05

University of Texas Libraries

Prepared for: INF 385p – Usability (Dr. Randolph Bias)

Prepared by: Laura Bright, Rachael Gilg and Heather Nodler

Date: March 24, 2005

Introduction

This document outlines the plan to conduct a usability evaluation of the application Docutek ERes v. 5.0.05, employed by the University of Texas Libraries. The purpose of this usability evaluation is to predict the performance of the user population using the application as it exists today and to make recommendations for improving the application. This plan includes the following sections:

- Purpose of the usability evaluation
- Target audience
- Design of the usability evaluation
- Data collection methodology
- Deliverables
- Resources
- Schedule

What is Docutek ERes?

Docutek ERes v. 5.0.05 is a third-party, web-based application used by professors and library staff to manage and provide students with universal, easy access to electronic course materials while ensuring compliance with federal copyright regulations.

Design Usability Goals

The Docutek ERes application was designed with the following general usability goals in mind:

1. To allow faculty and staff to upload and manage course materials easily and efficiently,
and
2. To allow students to retrieve course materials easily and efficiently.

Specific measurable goals for the usability evaluation are outlined in the Usability Evaluation Goals section of this document.

Purpose of the Usability Evaluation

The University of Texas at Austin Libraries recently implemented an upgraded version of the ERes application used to manage electronic reserves. The user interface has changed from the previous version, and users have reported informally that the new interface seems more difficult to use. The University of Texas Libraries is interested in conducting a usability evaluation of

ERes v. 5.0.05 in order to share the results with Docutek (the vendor) in the interest of improving the interface for future versions of the application.

The usability evaluation of ERes v. 5.0.05 will identify problems in the current user interface that impact ease-of-learning, ease-of-use, and overall user satisfaction. The scope of the project includes evaluations of both the *administrative* interface used by faculty and staff to manage electronic reserves, and the *public* interface used by students to locate and access electronic reserves. The team will develop and conduct separate usability evaluations of the two interfaces with the appropriate user groups.

Usability Concerns and Goals

Usability concerns for this application are divided into three sections: concerns related to the administrative interface, concerns related to the public interface, and concerns that relate to both interfaces. Specific quantitative and qualitative goals have been defined to evaluate each area of concern. These goals will guide the development of the task scenarios and questionnaires that will be used in the evaluation of each interface.

A. Administrative Interface (Faculty and Staff Users)

1. Will faculty and staff who have experience with the previous version of the ERes find the new version easy to learn?

Goal 1a: Experienced users of the previous version will be able to complete basic tasks without consulting the online documentation (FAQ).

Goal 1b: Experienced users of the previous version will be satisfied with the level of effort involved in learning the new version.

2. Will users be able to complete common administrative tasks in a timely and efficient manner? Common administrative tasks include the following: creating a new course page, creating a folder structure, creating a new document, uploading a file and associating it with a document, and adding document metadata.

Goal 2a: Users will be able to complete a series of common administrative tasks that make up a use case scenario within a specific time limit. Users will be timed during the evaluation and evaluated in comparison with benchmark times determined for completing the series of tasks.

Goal 2b: Users will successfully complete each task in the series on the first try.

Goal 2c: Users will feel that the time and effort expended is appropriate to each task.

3. Are the tools and processes used to perform administrative tasks easily understood?

Goal 3a: Users will be able to select the appropriate tool/process for the task being performed on the first try.

Goal 3b: Users will feel that tools and process are easy to understand and match their mental model of the task.

4. Are the tools used to perform tasks logically organized and easy to find?

Goal 4a: Users will locate tools with no visible or expressed difficulty.

Goal 4b: Users will feel that there is a logical organization to location and grouping of tools.

5. Is the online help sufficient for learning the application? Or, is further training needed to be able to effectively use the application?

Goal 5a: Users will be able to complete all tasks successfully with or without using the online documentation.

Goal 5b: Users will be satisfied with the online help, and feel that it provides them with all of the information necessary to use the system.

B. Public Interface (Student Users)

1. Can users find course pages through the search interface in a timely and efficient manner?

Goal 1a: Users given the appropriate search criteria will be able to locate a course page on the first try.

Goal 1b: Users will feel that the search interface is simple and effective.

2. Can users access electronic documents in a timely and efficient manner?

Goal 2a: Users will be able to locate and access an electronic document within a specific time limit. Users will be timed during the evaluation and evaluated in comparison with benchmark times determined for completing the scenario.

Goal 2b: Users will feel that time and effort expended in locating and accessing the document is appropriate to the task.

3. Can this application be used without assistance or referring to the online help? How will users feel about using the online help?

Goal 3a: Users will be able to use the application to perform basic tasks without consulting the online documentation (FAQ).

Goal 3b: Users will feel that the online help provides them with all of the information necessary to use the system.

C. Both Interfaces (All Users)

1. *Will users working on different platforms (browsers, operating systems) be equally successful at performing tasks?*

Goal 1: The interface will be identical for all users regardless of the platform being used, and no correlation will be found between platform and performance.

2. *Is navigation through the application efficient and logical?*

Goal 2a: Users will be able to navigate throughout the application with no expressed or visible difficulty.

Goal 2b: Users will feel that the effort used to navigate the site is appropriate to the task and not burdensome.

3. *Does the terminology and labeling used within the application facilitate use and understanding?*

Goal 3: Users will feel that the terminology and labeling are understandable, minimize confusion, and facilitate task completion.

4. *Is system response time adequate for user needs?*

Goal 4: Users will not feel that too much time was spent waiting for a process to run or waiting on a response from the system.

5. *Are there tasks that users will want to perform that are not currently supported by the application?*

Goal 5: Users will feel that the system provides all desired functionality.

6. *Is all the functionality provided by the application useful and necessary?*

Goal 6: Users will feel that the system does not have unnecessary functionality that may only serve to confuse the user.

Target Audience

The selection of users whose background and abilities are representative of the ERes application's intended end user is a crucial element of the evaluation process. Valid results will be obtained only if the users selected are typical end users of the product, or are matched as closely to the criteria as possible.

Background

The end users of the ERes application fall into two main categories:

1. Faculty and Staff (administrative users)
2. Students (public users)

Participant Selection Criteria

The following list shows the key characteristics of the end users that are considered as critical differentiators for successful adoption, and use, of the ERes application. These characteristics are the basis for participant selection for the usability evaluation. The participants will be selected to reflect the range of characteristics shown below.

- Job Function
 - University professor or library employee
 - University student
- Prior experience with application
 - University professor or library employee: some experience
 - University student: no experience, some experience
- Educational level
 - Some college, baccalaureate degree, graduate degree

Design of the Usability Evaluation

An online application usability evaluation for ERes in which 20 participants are tested in individual sessions will be completed for this project. Each testing session will consist of a 7-10 minute online application evaluation by the participant followed by the completion of a detailed questionnaire by the participant. The ERes online application evaluation will be guided by “real life” tasks that correspond to those commonly completed in this online environment. The post application evaluation questionnaire will collect behavioral, affective and demographic data from each participant.

The Evaluation Process

The usability evaluation process is as follows:

Participant Arrival at Testing Location

Each participant will arrive at the testing location, the Texas Interactive Lab (CMA 6.162) at the time they have scheduled for their session. Participants will be greeted by a usability tester and

shown to their computer station. A brief introduction to the project will be provided and the participants will be asked to sign a consent form to participate in this usability test. Additionally, participants will be asked to sign a release form regarding use of their videotaped and screen-captured usability evaluation.

Orientation

Once participants have completed all of the necessary forms, a usability team member will provide them with a brief description of the project and the purposes of this usability test. This short, scripted verbal explanation will vary according to whether the participant falls into the user category of student (public) or faculty/staff member (administrative). The participant will be reminded that this usability test is centered on the ERes online application and not their particular ability to use technology. At this point, the participant will be given instructions to “think aloud” during the evaluation as well as given a reminder that they will be videotaped and monitored by screen-capture software during their evaluation session.

Performance evaluation

The performance evaluation portion of the usability test involves having individual participants complete a series of assigned tasks at a designated computer station. The participant’s activity during this phase will be recorded on video, monitored by screen-capture software, and supervised and annotated by at least two (2) usability testers. The performance evaluation scenario will proceed accordingly:

- Following project orientation, participants will be asked to sit at a computer station and open their browser of choice (Internet Explorer, Firefox, Safari, etc.).
- Participants will then be instructed on the assigned tasks (administrative or public, depending on the user category) and shown where to obtain help online if needed.
- Participants will then proceed through the usability evaluation by completing the assigned tasks without any guidance from the usability tester. The participant will be encouraged to think aloud during this period and only ask for additional help if they become absolutely confused with the application.

Participant debriefing

Following the performance evaluation, either when the participant has completed their tasks or run out of time, a debriefing statement will be read to the participant by one (1) of the usability

testers. The debriefing portion of the evaluation will be taped as well and will include the following sections:

- Online Questionnaire - Participants will be asked to complete a brief online questionnaire that gathers behavioral, affective and demographic data. The questionnaire will vary depending on the user category (administrative or public).
- Verbal Response to Tasks - Participants will be asked to tell the usability tester about their experience using the ERes online application including any specific likes or dislikes within the system. This will constitute a general interview of what the participant felt about the ERes system.
- In-depth Interview - During this phase, participants will be probed directly about certain events that took place during their usability evaluation, i.e. any sticking points they encountered during the evaluation, any specific problems with wording, etc.

The debriefing session is an extremely important portion of the usability evaluation as it allows participants to convey their exact feelings about the product being tested. In addition, it allows the usability testers to ask direct questions about murky points of each participant's evaluation. Following the debriefing session, each participant will be thanked for their involvement in the ERes usability evaluation and provided with an appropriate token of appreciation.

Logistics

The usability test for ERes will be completed in the Texas Interactive Lab located in the Communications Building at the University of Texas. This lab is equipped with the necessary technology, including 6 computer stations all of which are networked and have access to the Internet. In addition to the PCs available, a Macintosh laptop will be available for users who feel more comfortable using this technology.

The Texas Interactive Lab is large enough to accommodate participants and usability testers without video technology being intrusive. A desk is available for participants to sit at following the evaluation in order to complete the in-depth interview and debriefing session. In case of availability conflicts, the usability testing will be moved to the iSchool Computer Lab at the University of Texas at Austin that is also equipped with the necessary computer equipment.

Requirements for the Evaluation

- Access to Texas Interactive Lab
- Three (3) usability testers / evaluation personnel
- 20 participants that meet the selection criteria:

10 administrative users (faculty/staff) and 10 public users (students)

- A support person within the ERes library staff
- Appropriate lab access to meet usability testing appointment times
- An online questionnaire for participants to complete
- Videotaping equipment
- Screen-capture software

Materials Design

The following materials (administrative and public versions) will be designed and developed for use in the ERes usability evaluation:

- Participant orientation / introduction package
- Two task scenario documents that include instructions for getting started and obtaining help online
- Questionnaire for use during debriefing session
- Debriefing package that includes in-depth interview questions

Data Collection Methodology

Data will be collected through the use of a “thinking aloud” protocol.

Measures to be collected include the following:

1. Amount of time taken to complete each task
2. Ratio of participants who did / did not complete tasks in given amount of time
3. Percentage of participants that successfully completed each task
4. Percentage of participants who were not able to recover from an error in the system
5. Number of times participants accessed online help with the ERes system
6. Number of positive and negative statements made by participants during their evaluations
7. Number and type of errors encountered during each usability evaluation
8. Number of times participants expressed liking or frustration with the ERes system
9. Patterns of ERes product usage for each participant (collected using screen capture software)

10. Overall feeling toward the ERes system (measured using questionnaire)
11. Ratings of each portion of the ERes system as measured using a Likert scale in the post evaluation questionnaire
12. Attitude scores as indicated in participants responses to online questionnaire probes
13. Demographic and psychographic data for each participant to be cross-tabbed with attitude scores

Deliverables

At the completion of the usability evaluation, a formal analysis will be performed. A final evaluation report and a highlight video will be provided to detail the significant problems and observations detected during the usability evaluation. Recommendations to address the findings will be delivered to the University of Texas libraries.

Resources

The following is an estimate for the total resource time requirements, in days.

Activity	Total Resource Time
Planning the evaluation and creating evaluation materials	2
Arranging logistics	1
Running the evaluation	10
Analyzing data	2
Preparation of final report and peer review	1
Presentation with video highlights	1
Total Time	17 days

Schedule

The usability evaluation will be conducted in late March and early April, 2005. The first week will be dedicated to developing evaluation materials and recruiting participants. The next two weeks will be dedicated to conducting the evaluation. The last two weeks will be dedicated to analyzing data, preparing a final report and creating a presentation with video highlights from the evaluation sessions.

Assumptions

In the course of the evaluation, the following will be assumed:

- Users more familiar with the application will require less time to complete tasks and may express less dissatisfaction with the application.
- Based on prior user feedback, administrative users will express high levels of dissatisfaction with the ease-of-learning of the application, the way in which tools are organized and presented, and the terminology and labeling used within the application.
- The majority of users will not meet all expressed goals.
- Problems encountered by administrative users will vary greatly from those encountered by public users.
- As the evaluation will only test the basic functionality of the application, further testing may be required.