

Usability Evaluation Plan

I. Introduction and Definition

A review of the usability literature indicated many definitions for usability that would apply for the Capstone Project. Krug (2000) provides a simple, easy-to-understand definition: “Usability really just means making sure that something works well: that a person of average (or even below average) ability and experience can use the thing for its intended purpose without getting hopelessly frustrated” (p. 5). Jacob Nielsen, the usability guru, defined usability in his August 2003 *Alertbox* as “a quality attribute that assesses how easy user interfaces are to use. The word ‘usability’ also refers to methods for improving ease-of-use during the design process.”

In the glossary for developer resources found on the Massachusetts Institute of Technology’s (MIT) web site, usability testing is defined as “a range of methods that examine how users in the target audience interact with a software application in order to measure its usability.” Usability testing plays an important role in instructional design by reducing design and development time (hence costs) and increasing user satisfaction.

The course I am creating for my final project is a self-instruction course titled *Instructional Design for Business Consultants*.

II. Target User Profile (table)

The target profile information for the business consultant audience who will be taking the *Instructional Design for Business Consultants* course is shown in Table 1.

Table 1. *Description of Learner Characteristics*

Information Categories	Data Source	Learner Characteristics
1. Education	Human Resources	The majority (75% of the population) have Masters degrees.
3. Cultural Background	Human Resources	Diverse.
4. Age	Human Resources	Average age is 30 – 40 years old.
5. Sex	Human Resources	About an even mixture of male and female.
5. Prior knowledge of topic area	Interviews	The learners have very little instructional design experience or education.
6. Attitudes toward content.	Interviews Observations	The learners are highly motivated to pursue excellence, however several said they would prefer more challenging assignments than creating training materials.
7. Attitudes toward potential delivery system	Interviews Observations	Most learners consider themselves as “teckies” and are interested in an on-line learning opportunity within their company.
8. General learning preferences	Focus Group Interview Observations	They prefer to learn in a classroom environment because it means time away from work. They don’t have to do it on their own time. Since they work 60 hours a week on the average and fly two days a week, there is little time left over for self-instruction off the job.

Information Categories	Data Source	Learner Characteristics
<p>9. Work product experience.</p>	<p>Interviews Observations</p>	<p>The business consultant performs many tasks in their role that are similar to those of an instructional designer. Some of these activities are:</p> <ol style="list-style-type: none"> 1. Creating PowerPoints and Visio process flows to define at a high level the client's as-is and desired business states. 2. Creation of functional specification documentation. 3. Delivery of items 1 and 2 to business stakeholders. 4. Creation of process flows during design sessions. 5. Determining from a user perspective who performs what tasks, if the task is changing, and if so, what training is needed. 6. Acting as an SME for the instructional designer. <p>The work product should be easy for the business consultant to learn and understand since there are so many crossovers with their current consultant job duties.</p>

III. The Tests

Exploratory Testing

The first test I will perform will be exploratory testing. During this test the consultant designated by my company to support me on this project will explore my design documents and the alpha prototype. The test instruments will be an invitation to assist in the test, a meeting agenda and test script to explain the purpose of the test and guide the meeting, and a post-test questionnaire. I plan to complete the exploratory test prior to finalizing my design document and before proceeding with further development. After I have completed the exploratory testing I will update the design documents and the alpha prototype. A slightly modified form of exploratory

testing was performed in EDT 607 when classmates and the professor reviewed the design documents and alpha prototype and provided feedback. So I feel fairly confident of the usability of the product. But I still want to get feedback from a consultant.

Assessment Test

I will perform the assessment test just about half way through the completion of the development phase. I will observe the users as they are performing this test. The test instruments I will use are a test invitation, usability script, observation form, tester guidelines, and a post-test interview. The observation form will be used to collect quantitative data such as how long it takes the user to complete a topic, how many times they have to ask for help and the areas they needed help with, how many development errors were found, how many errors they made, etc. The results of this test will be used as input for the validation test. See the [Appendix](#) for samples of the test instruments.

Validation Test

The final test I will perform will be a validation test. My plan is to recruit three consultants to help with this test towards the end of development, prior to release of the course. The purpose of the test is to verify that the course meets the usability guidelines that were developed during the design, and the expectations that were set as the result of assessment testing are being met. The test instruments will be an invitation to assist in the test, a test script explaining the purpose of the test, test scenarios for the testers to use to perform the tests, and a posttest questionnaire.

IV. Study Limitations / Constraints

The first constraint I see is the amount of time I have available to devote to the testing. During the first six months of employment with my new company there is a very heavy emphasis placed on new employee orientation. New employees are required to complete a schedule of online courses within their first six months of employment. I am still struggling with a plan to determine how I can be successful on my new job and at the same time successfully complete this degree program.

The second constraint I see is the availability of consultants to support the testing. I am not sure if the company will free up time for the consultants during their work day or if the consultants will have to volunteer to support on their own time. If they have to support the testing on their own time it will be more difficult to recruit testers.

Appendix A. Usability Test Session – Assessment Test

1. Invitation

Hi,

You have been invited to participate in a usability test for the *Instructional Design for Business Consultants* online course. The purpose of this usability test is to see what is working well and what is not working well with the goal of improving the course before it is released to our group.

As a tester for this course your role will be to perform the evaluation as outlined in the “Assessment Test – Tester Instructions” file attached to this email and to complete a Post Test Questionnaire also attached to this email. I will provide further instructions on the day of the test.

Course Goal

The goal of the course is to help eLoyalty business consultants become more skilled in performing instructional design activities on client projects.

Audience

The audience for this course is eLoyalty business consultants. Most business consultants do not have an instructional design background or experience but will be given various types of instructional design project assignments in the future. This course will be offered online on an as-needed basis to provide instruction on how to perform the instructional design tasks most likely to be assigned. The training course materials will reside on eLoyalty’s corporate knowledge exchange and the course will be launched from the same location.

Test Schedule

The schedule for the usability testing is [*day, month, date, time, and location*]. It should take approximately [*estimate of the amount of time*] for you to perform the test.

Thanks you for volunteering and I look forward to participating in the test with you.

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Regards,

[author's name]

2. Test Script (To be used the day of the test to start off the test session.)

Good [*morning or afternoon*]:

My name is [author's name] and I want to thank you for volunteering to assist in the assessment test for a course I created for Business Consultants who are assigned to perform instructional design activities on projects but don't have a strong instructional design background. I'm testing this course to see how well it works for consultants when they go through the eLearning course.

Since you perform testing as part of your consulting activities or most likely have in the past, you know that you don't have to worry about making mistakes. In fact, I want to see what kind of mistakes will be made.

Something that may be new to you when testing is that I want to "hear" what you think. As we go along, I'm going to ask you to "think out loud" to tell me what's going through your mind. I have provided space on your test instruction document if you need to write a few words to compose your thoughts. But please express your thoughts verbally after you have jotted down some words. My goal is to gather your thoughts so I can improve the course before I release it to our skill group.

If you have questions, just ask. I may not be able to answer them right away, since I'm interested in how people do when they don't have someone sitting next to them. But I will try to answer any questions that are still open when you are finished with the test. If I don't have an answer then, I will write the question down as a parking lot item and get back to you with an answer.

Now, I'm going to ask you to open up the file I sent to you attached in your email invitation titled *Assessment Test – Tester Instructions*. Let's go over in general what I want you to think about as you are performing the usability test. (Review the bulleted items.)

Do you have any questions before we begin?

OK, let's start testing. Please follow the instructions beginning on Step 1.

3. Tester Instructions

The URL access to the course is: <http://xxxxx>

Things to Think About When You are Performing the Usability Test

- General look and feel.
 - a. Inviting
 - b. Easy to read
 - c. Uncluttered
 - d. Consistent in design
 - e. Demonstrates sufficient use of graphics
 - f. Written with correct grammar and spelling
- Content
 - a. Content is presented in a clear fashion
 - b. Content is relevant to the subject
- Navigation
 - a. Simple and easy to follow

Test Guidelines

Step 1 – Welcome Page

- ♦ Access the Welcome page by entering the URL: <http://xxxxx>
- ♦ Read the text on the page.
- ♦ Review all graphics.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

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Step 2 – Course Overview

- ◆ Navigate to the Course Overview
- ◆ Read the text on the page.
- ◆ Review all graphics.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

Step 3 – Intro to ID.

- ◆ Navigate to the Intro to ID lesson.
- ◆ Review the text provided on the lesson introductory page.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

Step 4 – “What is ID?” topic.

- ◆ Navigate to the “What is ID?” topic.
- ◆ Read the text on all of the topic pages.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

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Step 5 – “What is ID?” topic quiz.

- ◆ Navigate to the “What is ID?” topic quiz.
- ◆ Take the quiz.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

Step 6 - Analyze and Plan Lesson, Course Curriculum Topic.

- ◆ Navigate to the Analyze and Plan Lesson.
 - Review the lesson introductory page
- ◆ Navigate to the Course Curriculum Topic.
- ◆ Go through the Course Curriculum Topic.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

Step 7 - Course Curriculum Activity.

- ◆ Navigate to Course Curriculum Activity.
- ◆ Create a course curriculum per activity instructions.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

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Step 8 - Term Definition.

- ◆ Look up the meaning of the term “curriculum.”

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

Step 9 - Course Navigation.

- ◆ Navigate through the lessons and topics in any order.

Comments – please provide verbal feedback as we go along, but if you need to compose your thoughts you can use the space below.

4. Observation Form

Consultant (User) Name _____

Date: _____

Site URL: http://xxxxx

Time	Task Description	Observations/Comments/Notes
Start: _____ End: _____ Total: _____	1. Access the Welcome Page through the site URL.	Experience with Flash; intro page: _____ _____ How many times they have to ask for help: _____ _____ Areas the tester needed help with: _____ _____ Development errors found: _____ _____ _____

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Time	Task Description	Observations/Comments/Notes
		Number and description of errors tester made: <hr/> <hr/>
Start: <hr/> End: <hr/> Total: <hr/>	2. Go through the course overview. <ul style="list-style-type: none"> ◆ Navigate to the Course Overview ◆ Read the text on the page. 	Experience with Flash; intro page: _____ <hr/> How many times they have to ask for help: _____ <hr/> Areas the tester needed help with: <hr/> <hr/> Development errors found: <hr/> <hr/> Number and description of errors tester made: <hr/>

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Time	Task Description	Observations/Comments/Notes
		<hr/> <hr/>
<p>Start: _____</p> <p>End: _____</p> <p>Total: _____</p>	<p>3. Navigate to the Intro to ID lesson and review the lesson information page.</p> <ul style="list-style-type: none"> ◆ Navigate to the Intro to ID lesson. ◆ Review the text provided on the lesson introductory page. 	<p>Experience with Flash; intro page: _____</p> <hr/> <p>How many times they have to ask for help: _____</p> <hr/> <p>Areas the tester needed help with:</p> <hr/> <hr/> <p>Development errors found:</p> <hr/> <hr/> <p>Number and description of errors tester made:</p> <hr/>

Time	Task Description	Observations/Comments/Notes
		<hr/> <hr/>
<p>Start: _____</p> <p>End: _____</p> <p>Total: _____</p>	<p>4. Navigate to the first topic in the Intro to ID lesson titled <i>What is ID?</i></p> <ul style="list-style-type: none"> ◆ Navigate to the “What is ID?” topic. ◆ Read the text on all of the topic pages. 	<p>Experience with Flash; intro page: _____</p> <hr/> <p>How many times they have to ask for help: _____</p> <hr/> <p>Areas the tester needed help with:</p> <hr/> <hr/> <p>Development errors found:</p> <hr/> <hr/> <p>Number and description of errors tester made:</p> <hr/> <hr/>

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Time	Task Description	Observations/Comments/Notes
Start: _____ End: _____ Total: _____	5. Take the ID topic quiz. <ul style="list-style-type: none"> ◆ Navigate to the “What is ID?” topic quiz. ◆ Take the quiz. 	Experience with Flash; intro page: _____ _____ How many times they have to ask for help: _____ _____ Areas the tester needed help with: _____ _____ Development errors found: _____ _____ Number and description of errors tester made: _____ _____
Start: _____	6. Navigate to the Analyze and Plan Lesson and go through the third topic,	Experience with Flash; intro page: _____

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Time	Task Description	Observations/Comments/Notes
<p>_____</p> <p>End:</p> <p>_____</p> <p>Total:</p> <p>_____</p>	<p>Course Curriculum.</p> <ul style="list-style-type: none"> ◆ Navigate to the Analyze and Plan Lesson. <ul style="list-style-type: none"> ○ Review the lesson introductory page ◆ Navigate to the Course Curriculum Topic. ◆ Go through the Course Curriculum Topic. 	<p>_____</p> <p>How many times they have to ask for help: _____</p> <p>_____</p> <p>Areas the tester needed help with:</p> <p>_____</p> <p>_____</p> <p>Development errors found:</p> <p>_____</p> <p>_____</p> <p>Number and description of errors tester made:</p> <p>_____</p> <p>_____</p>
	<p>7. Complete the topic activity, Create a Course Curriculum.</p> <ul style="list-style-type: none"> ◆ Navigate to Course 	<p>Experience with Flash; intro page: _____</p> <p>_____</p>

Time	Task Description	Observations/Comments/Notes
	<p>Curriculum Activity.</p> <ul style="list-style-type: none"> ◆ Create a course curriculum per activity instructions. 	<p>How many times they have to ask for help: _____</p> <hr/> <p>Areas the tester needed help with:</p> <hr/> <hr/> <p>Development errors found:</p> <hr/> <hr/> <p>Number and description of errors tester made:</p> <hr/> <hr/>
	<p>8. Look up the meaning of the term curriculum.</p> <ul style="list-style-type: none"> ◆ Look up the meaning of the term curriculum. 	<p>Experience with Flash; intro page: _____</p> <hr/> <p>How many times they have to ask for help: _____</p>

Time	Task Description	Observations/Comments/Notes
		<hr/> <p>Areas the tester needed help with:</p> <hr/> <hr/> <p>Development errors found:</p> <hr/> <hr/> <p>Number and description of errors tester made:</p> <hr/> <hr/>
<p>Do not record time for this task.</p>	<p>9. Course navigation.</p> <ul style="list-style-type: none"> ◆ Navigate through the lessons and topics in any order. 	<p>Experience with Flash; intro page: _____</p> <hr/> <p>How many times they have to ask for help: _____</p> <p>Areas the tester needed help with:</p> <hr/> <hr/>

Usability Evaluation Plan Sample

Time	Task Description	Observations/Comments/Notes
		<p>Development errors found:</p> <hr/> <hr/> <p>Number and description of errors tester made:</p> <hr/> <hr/>

5. Post Test Questionnaire

1. Able to complete tasks as requested

Frustrating 1 2 3 4 5 Easy Score: _____

2. Able to navigate through the site

Confusing 1 2 3 4 5 Very Clear Score: _____

3. Overall look and feel of site

Not pleasing 1 2 3 4 5 Pleasing Score: _____

4. Relevance of site images to content

Not relevant 1 2 3 4 5 Relevant Score: _____

5. Relevance of site content (text)

Not relevant 1 2 3 4 5 Relevant Score: _____

6. Proper use of grammar and spelling

Improper Use 1 2 3 4 5 Proper Use Score: _____

6. Overall ease of use

Confusing 1 2 3 4 5 Very Clear Score: _____

7. Overall page layout and organization

Confusing 1 2 3 4 5 Very Clear Score: _____

8. Was the site inviting to use?

Not inviting 1 2 3 4 5 Inviting Score: _____

9. Were the naming and labeling of links clear?

Confusing 1 2 3 4 5 Very clear Score: _____

10. If you were a business consultant would you recommend this site to another business consultant?

Never 1 2 3 4 5 Absolutely Score: _____

Please document any additional comments about the site and your experience:

Thank You Very Much for supporting the usability testing for the Introduction to *Instructional Design for Business Consultants* course!

Resources

Krug, S. (2000). *Don't make me think! : a common sense approach to Web usability*.

Indianapolis, IN: New Riders.

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Computing. Retrieved April 16, 2005 from

http://web.mit.edu/ist/org/admincomputing/dev/gl_a.shtml

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April 16, 2005 from <http://www.useit.com/alertbox/20030825.html>