

Usability Evaluation Plan
Educational Technology Training Course (ETTC)
For Simpson University Faculty

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I. Introduction and Definition

According to Krug (2006), usability is simply “making sure that something works well: that a person of average (or even below average) ability and experience can use the thing.” Similarly, Nielsen (2012) defined usability as a “quality attribute that assesses how easy user interfaces are to use.” Principles of usability drive design decisions, particularly in the context of web page creation. Usability challenges web designers to consider notions of learnability, efficiency, memorability, errors, and satisfaction when creating user interfaces. Usability testing is the process of identifying a design’s most important usability problems (Nielsen, 2012).

Usability testing ensures the survival of a website. Nielsen (2012) cautioned that if a website is difficult to use or fails to clearly state what is offered and what users can do on the site, people will leave the site. In addition, if users get lost on a website or if key questions are not answered, people will leave the site. Simply put, without usability testing, usability problems would go unnoticed and thus severely cripple the web experience.

The title of this product under development is entitled “Educational Technology Training Course (ETTC)”.

II. Target User Profile

Category	Data Source	Characteristics
Education	WASC Accreditation Survey	100% of learners have at least a Masters degree.
Cultural background	WASC Accreditation Survey	Predominantly Caucasian.

Age	WASC Accreditation Survey	Average age is 47 years old.
Sex	WASC Accreditation Survey	Greater number of men than women.
Prior knowledge of topic area	Moodle Usage Survey	There are various levels of expertise depending on the specific topic.
Attitudes toward content	Moodle Usage Survey	The majority of the content is seen as essential in providing a 21 st century education.
Attitudes toward potential delivery system	Interviews, Observations, Moodle Usage Survey	Most learners teach classes both online and in a classroom and have requested in person as well as online trainings.
General learning preferences	Moodle Usage Survey	Both online and in person trainings are equally preferred.
Computer hardware experience	Moodle Usage Survey	Most learners report being at least “comfortable” with using Moodle, Gmail, Word, Excel, PowerPoint, and Windows-based computers.

III. The Usability Tests

Exploratory Testing

Rubin (2008) summarized the objective of exploratory tests as the examination of effectiveness of preliminary design concepts (p. 29). Because this test is performed early in the development of the course (while the course is still being defined and designed), I will invite my

supervisor to act as a consultant who will assist with the structure, scope, and sequence of the prototype course. As Rubin (2008) suggested, the process will be informal collaboration with me acting as the test moderator and the consultant playing the role of test subject (p.35). Test instruments will include a test invitation and documentation of the strengths and weaknesses along with suggested modifications. I will also share all design documentation with the consultant via Google Docs so that he can document his own thoughts directly. This test will be conducted after collaborating with subject matter experts (SMEs) during the design phase but before design documentation has been finalized. The results of this test will inform final design decisions and then be used to proceed into the development phase where work on the prototype course is continued.

Assessment Testing

The purpose of the assessment test is to examine and evaluate how effectively the concept has been implemented (Rubin, 2008, p. 34). Furthermore, this test is designed to simulate how well a user can actually perform realistic tasks and identify specific usability deficiencies in the course. This test will be conducted toward the latter half of the development phase. The users will be observed and their experience recorded using the following instruments during the test: test invitation, usability script, observation form, test guidelines, and post-session questionnaire (see Appendices). This test will collect qualitative data such as ease of use, relevance of material, and look of the course. In addition, this test will also collect quantitative data such as length of time needed to complete topic, numbers of errors made, and number of development errors. Three to four users (test subjects) should be sufficient for this test. The results will be used to inform the validation test.

Validation Testing

The validation test will be the final test prior to the implementation phase of the course. The validation test will occur toward the end of the development phase. The purpose of the validation test is to confirm that “problems discovered earlier have been remedied and that new ones have not introduced” (Rubin, 2008, p. 35). Three consultants will be invited to assist with this test, analyzing the results of the assessment test and verifying that the course is meeting the established usability guidelines developed during the design phase. Test instruments will include test invitations, test script, test scenarios, and a post-test survey.

Comparison Testing

The comparison test is typically utilized to compare two or more designs and can be used in conjunction with other tests (Rubin, 2008, p.37). At this point there is no intention of implementing this test unless alternative design choices arise during the design and development phases or as a result of the other usability tests.

IV. Study Limitations / Constraints

- Technological – Computer lab and classroom availability is limited due to previously scheduled classes.
- Human – Consultants and test users have other obligations and thus their availability is limited.
- Financial – There is no budget for this course or evaluation. Because the university currently employs the prospective consultants said employer is already compensating their time.

- Time – The instructional designer is solely responsible for developing the ETTC. The time required to design and develop the course in addition to usability testing could delay the implementation of the course. Availability of consultants and test users will affect test scheduling and duration.

V. Usability Test Script

<Begin session with computers logged in but at desktop screen. Users will open web browser and enter web address>

Hi, _____. My name is _____, and I'm going to be walking you through this session today. First of all, thank you so much for participating in this assessment test for a course designed for our faculty.

Before we begin, I have some information for you, and I'm going to read it to make sure that I cover everything.

You probably already have a good idea of why we asked you here, but let me go over it again briefly. We're asking people to try using a Moodle course that we're working on so we can see whether it works as intended. This is the online portion of a hybrid course entitled the "Educational Technology Training Course" or ETTC that will be required for all new and existing faculty members to take and pass in order to teach at Simpson University.

The goals for this course are as follows: Upon completion of training the trainees will be able to:

- Create effective courses in Moodle by using course-editing features.
- Synthesize classroom pedagogy with online pedagogy through the use of Moodle-based grading, assignments, discussions, and resources.
- Evaluate the classroom computer, document camera, Apple TV, digital and digital projector in order to create effective lesson plans.
- Use the classroom computer, audio/video tuner, digital projector, Apple TV, Wi-Fi, document camera, and laptop connection.
- Use Moodle by logging into Moodle, navigating the system, managing courses, creating assignments, adding resources, grading assignments, managing discussion forums, and
- Use Google Apps to create and share documents

As you navigate the course, do your best to consider the experience through the eyes of the average faculty member.

The session should take about an hour.

The first thing I want to make clear right away is that we're testing the course, not you. You can't do anything wrong here. In fact, this is probably the one place today where you don't have to worry about making mistakes.

As you use the site, I'm going to ask you as much as possible to try to think out loud: to say what you're looking at, what you're trying to do, and what you're thinking. This will be a big help to us.

Also, please don't worry that you're going to hurt our feelings. We're doing this to improve the site, so we need to hear your honest reactions.

If you have any questions as we go along, just ask them. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them to help. But if you still have any questions when we're done I'll try to answer them then. And if you need to take a break at any point, just let me know.

Thanks. Now I'm going to ask you to try doing some specific tasks. I'm going to read each one out loud and give you a printed copy.

<Pass out directions>

And again, as much as possible, it will help us if you can try to think out loud as you go along.

Are there any questions?

<Pause for questions, answer as necessary>

OK, then. Let's begin. Please follow the directions in front of you as I read them aloud.

Adapted from Krug, S. (2010). *Rocket Surgery Made Easy*. Berkeley: New Riders

Appendix 1

POST-SESSION QUESTIONNAIRE

Use the scale below to indicate your opinion on each of the following statements.

3 = agree

2 = neutral

1 = disagree

- 1. Requested tasks were completed with ease. _____
- 2. The website was easy to navigate through. _____
- 3. The overall look and feel of the course site to be pleasing. _____
- 4. The images on the course site were relevant to the content. _____
- 5. The content (text) on the site was relevant. _____
- 6. The grammar and spelling on the site was found to be of proper use. _____
- 7. Overall, the site was very easy to use. _____
- 8. The page layout and organization was very clear. _____
- 9. The site was inviting to use. _____
- 10. Links were named clearly and labeled effectively. _____
- 11. This course would be very beneficial to faculty members. _____

Please share any additional comments about the course and your experience.

THANK YOU FOR YOUR TIME AND SUPPORT!

Appendix 2

Email Invitation for Assessment Test

Greetings,

I would like to invite you to participate in a usability test for the Educational Technology Training Course (ETTC). This is a hybrid course designed for the benefit of the faculty at Simpson University. 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 the faculty.

As a tester for this course your role will be to use the Moodle-based part of the course. I will observe you as you navigate the course and use its various features. I will document your experiences and solicit your feedback at the end of the session. Your participation will be of vital importance in developing the course so that it is of maximum benefit for our faculty.

Course Goal

Upon completion of training the trainees will be able to:

- Create effective courses in Moodle by using course-editing features.
- Synthesize classroom pedagogy with online pedagogy through the use of Moodle-based grading, assignments, discussions, and resources.
- Evaluate the classroom computer, document camera, Apple TV, digital and digital projector in order to create effective lesson plans.
- Use the classroom computer, audio/video tuner, digital projector, Apple TV, Wi-Fi, document camera, and laptop connection.
- Use Moodle by logging into Moodle, navigating the system, managing courses, creating assignments, adding resources, grading assignments, managing discussion forums, and
- Use Google Apps to create and share documents

Audience

The audience for this course is all current and future faculty members at Simpson University. The ETTC is designed to provide standardized instruction to all faculty members in an effort to equip them with research-based best practices and the knowledge necessary to be successful with the available educational technologies at the university.

Test Schedule

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

Thank you for your time and assistance with this test!

Regards,

Justin Loh
IT Specialist

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