NORTHEASTERN UNIVERSITY WEB SITE USABILITY TEST
USABILITY TEST PLAN
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INTRODUCTION

This document outlines the plan for conducting a usability test of certain functions on Northeastern University's Web site. All aspects of the proposed plan are outlined in the following sections:

- Executive Summary
- Problem statements
- User Profiles
- Methodology
- Test environment and equipment requirements
- Evaluation Measures
- Task List
- Test Results
- Discussion
- Recommendations
- Appendices – Surveys & Forms
    - A.   Background Questionnaire
    - B.   Orientation Script
    - C.   Video Consent Form
    - D.   Post Test Questionnaire

EXECUTIVE SUMMARY

Northeastern University's Web site has a wide and varied audience: new and prospective students, returning graduate and undergraduate students, parents, faculty, researchers, and alumni. Each of these audience segments uses the site to different ends. Northeastern states that the purpose for the homepage and the administrative pages is "to provide a single point of entry to information and services that are provided by departments within Northeastern University".[1] The university refers to its Web presence as being made up of hundreds of "sites" independently managed by individual offices and departments.

But from the perspective of target audience members (the "users"), Northeastern is one university that has one Web site (both admittedly massive). Users come to the site to accomplish specific tasks that don't respect department boundaries.

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[1] Retrieved from http://www.northeastern.edu/neuhome/aboutnortheastern/welcomewebsite.html on 1/24/09

The purpose of the tests planned herein is to evaluate the site's usability for the 5 highest priority tasks of the largest group of users: new and returning students. This test will establish baseline measures to be used to persuade the University to create a more coordinated "Web presence" that will increase usability for their largest user group.

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TEST OBJECTIVE/PROBLEM STATEMENTS

After analyzing the purpose of the Northeastern web site, we have determined that the following tasks need to be analyzed to evaluate the site's usability. Students should be able to:

1. Find the academic calendar
2. Identify three classes they need to take in the upcoming quarter
3. Register for the three classes
4. Locate the online bookstore
5. Find the books they need for their classes
6. Purchase the books they need for their classes
7. Log on to their myNEU page
8. Find their grades if they are returning students
9. Find their current balance
10. Pay their bill

USER PROFILES

We have an intentionally narrow focus for the testing on students only, which log analysis shows make up the largest user group for the site.

We will test both new users, novices to the Northeastern site, as well as returning students who can be assumed to have some familiarity with the site. In this manner we intend to identify what usability issues can be overcome by experience with the site, while also gathering data on those issues that are still bothersome to more experienced users.

We will phone students randomly from data provided by the Registrar's office and ask them for the background information from the screening questionnaire in Appendix A. If they are willing to participate in the study, we will offer them $50 for a 45-minute test.

Target Group

Our target group is new and returning students at Northeastern University, as described below. Also shown are the profile requirements for the sample population based on recent statistical information regarding student profiles.

1. New students (graduate and undergraduate) – those beginning their first term at Northeastern. These are intelligent people likely to have had significant experience using many types of Web sites, but who are novices with the Northeastern site.

2. Returning Students (graduate and undergraduate) – those who have completed at least one quarter at Northeastern This group will also have a high degree of intelligence and some college education. We expect that they will also have had significant experience on the Web.

User Profile

Age	Frequency Distribution
18–30	56.0
31–40	27.5
41–50	12.5
51–60	4.0

Sex	Frequency Distribution
Female	50.0
Male	50.0

Education	Frequency Distribution
College	75
No College	25

Learning Style	Frequency Distribution
Trial and Error	62.5
Consult with Others	75.0
Documentation	37.5
Other	12.5

PC Experience in Years	Frequency Distribution
0–3	25
4–7	25
8–11	25
12–16	25

PC Daily Usage	Frequency Distribution
0–2	12.5

3-5	60.0
5-8	27.5

Internet Experience	Frequency Distribution
0	0
1-3 Years	25.0
4-7 Years	35.0
8-11 Years	30.0
12-16 Years	10.0

Familiarity w/ NEU Site	Frequency Distribution
Yes	37.5
Slightly	50.0
I Know it Exists	12.5
Not at all	0

Based on data obtained from:
http://www.stateuniversity.com/universities/MA/Northeastern_University.html on 1/24/09
http://www.braintrack.com/college/u/northeastern-university on 1/24/09

METHODOLOGY

The usability test will consist of the main performance test designed to gather extensive usability data via direct observation.

The main performance test is composed of the following four sections:

1. Participant greeting and background questionnaire

Each participant will be greeted by the test moderator, offered a seat and a beverage. The participants will be given a very short questionnaire that gathers basic background information. Participants will be notified that they will be anonymous throughout the session, and that they will be assigned a unique ID number, which will be used in place of their name.

2. Orientation

The participant will listen to a short, verbal script that will explain the agenda for the day. All parts of the test will be explained. The participants will be notified of their right to leave the session should they become uncomfortable. They will also be notified that we wish to videotape the session. If they agree, they will then be asked to sign a video consent form (Appendix C).

Finally, the participant will be asked to sign a non-disclosure agreement (NDA) that states that they will not discuss this session to anyone outside the research team.

3. Performance test

During this section of the test, the participants will be asked to perform a series of tasks on the Northeastern Web site. Each task will be introduced by way of a short, scripted instruction from the test moderator.

For each task, the test moderator and the data logger will record the participant's actions, including time elapsed, number of clicks, and success/failure.

The individual tasks are enumerated in the Task List section.

4. Participant debriefing

After all tasks are complete or the time expires, the test monitor will debrief each participant and the debriefing will be videotaped. The debriefing will gather the following information:

- Participant's perceptions about the usability and aesthetics of the site
- Participant's overall comments about his or her performance
- Participant's responses to the test monitor asking about errors or problems during the test

The debriefing session serves several functions. It allows the participants to say whatever they like, which is important if tasks are frustrating. It provides important information about each participant's rationale for performing specific actions, and it allows the collection of subjective preference data about the site.

After the debriefing session, the participants will be thanked for their effort, and the compensation will be given to them.

TEST ENVIRONMENT AND EQUIPMENT REQUIREMENTS

Our testing lab will be a simple setup, including a computer workstation, and three seats: one for the participant, one for the test moderator, and one for the data logger. We will use 2 video cameras, a very small one to record the users' facial reactions and the other on a tripod to record the computer screen throughout the test session. A diagram of the setup we will use is shown below.
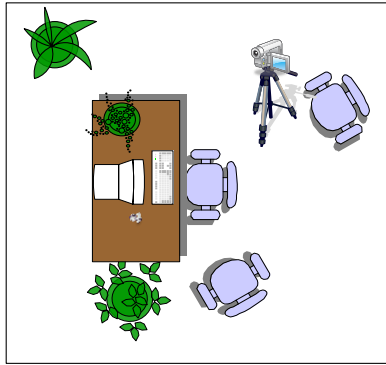
EVALUATION MEASURES

The following evaluation measures will be collected and calculated:

1. The average time to complete each task, and average number of clicks, across all participants.
2. The percentage of participants who finished each task successfully versus those who had errors from which they could not recover.
3. Error classification: each error will be classified and, to the degree possible, a source of error indicated. Error classes are as follows:
    a. Usability catastrophe – a problem that prevented the user from completing a task.
    b. Serious usability problem – one that slowed users down significantly but did allow them to complete their task
    c. Cosmetic problems – delayed users slightly or annoyed the users as indicated by their verbal comments
    d. Observation and Comments – The test monitor notes when participants have difficulty or when a cause of error becomes obvious.
4. Participants' ranking of usability and aesthetics of the site.

NORTHEASTERN UNIVERSITY WEB SITE USABILITY TEST
TASK LIST

TASK LIST LEGEND:

      SCC   = Successful completion criteria

      MTC   = Maximum time to complete

      ATC   = Actual Time to Complete

#	TASK DESCRIPTION	TASK DETAIL = SCC	MTC
1	Locate the academic calendar.	Navigate to either of the URLs shown below: http://www.northeastern.edu/registrar/cal0809-all-3.pdf http://www.northeastern.edu/registrar/cal0809-all-c.pdf	1 Min
2	Identify 3 classes you need to take next quarter.	Navigate to URL: http://www.northeastern.edu/registrar/ocs-nucor-sp09.html OR to http://www.northeastern.edu/registrar/cdr.html and select 3 classes.	10 Min
3	Register for the three classes.	Navigate to URL below, complete the form and submit. http://www.northeastern.edu/registrar/ocs-nucor-sp09.html	10 Min
4	Locate the online bookstore.	Navigate to the URL: http://northeastern.bncollege.com/webapp/wcs/stores/servlet/BNCBHomePage?storeId=17555&catalogId=10001&langId=-1	1 Min
5	Find the required books for your 3 registered classes.	Required books for 3 selected classes in shopping cart.	10 Min
6	Use the given credit card number to buy the required books for your 3 registered classes.	Navigate to the URL below, fill out form, and complete transaction: https://secure.bncollege.com/webapp/wcs/stores/servlet/BNCBLogonForm?jspStoreDir=northeastern&catalogId=10001&langId=-1&storeId=17555&krypto=q85trq45t1LHmDnKC%2FnrxF9gfFtI9V9924i%2F%2FWXHIisddOggKq9wot17BohFi8orZsBhYsLtobjE%0Aa0lLV8CMR9TuE3KThm%2FePrQPK%2F0PNE2nNFI1QlKlptyi2YLzpt63ZPhog3q5oJQErem%2Bj7GA%2F0Hq%0A66eMI6sM8kcUPta1m%2F7b0l2MaQkVrbSruoEj4lukJogHnn6A74HL5yXuEOhlSjnzQ4O2mdJS8810%0AxBGqaIZZjMaaRuBz1XnqbtsQPsehXoMXAT21OYQw2oJlcc%2BQJcqaXngAqLkx&ddkey=OrderCalculate	5 Min
7	Log into myNEU.	Navigate to URL: http://myneu.neu.edu/cp/home/loginf and log in.	2 Min
8	Look up your grades on myNEU.	http://myneu.neu.edu/cp/tag.9b49c589aa1028c5.render.	2 Min

		userLayoutRootNode.uP?uP_root=root&uP_sparam=activeTab&activeTab=u46l1s13&uP_tparam=frm&frm= and click on 'My Grades'	
9	Find your current balance.	Navigate to URL: https://commerce.cashnet.com/cashnetc/selfserve/youraccount.aspx	2 Min
10	Use the given credit card number to pay your balance.	https://commerce.cashnet.com/cashnetc/selfserve/youraccount.aspx	4 Min

NORTHEASTERN UNIVERSITY WEB SITE USABILITY TEST
PERFORMANCE RESULTS

Performance Data Summary

| Task # | Percentage of participants performing: | | Mean Time (minutes) | Mean clicks |
	Correctly (within benchmark)	Incorrectly (within benchmark)		
Task 1				
Task 2				
Task 3				
Task 4				
Task 5				
Task 6				
Task 7				
Task 8				
Task 9				
Task 10				

Preference Data Summary

#	Questions	%SA	%A	%N	%D	%SD	%NA
1	Was the language on the Task List easily understood?						
2	Navigation was inherently easy.						
3	The pages were quick to load.						
4	I was able to move around the site without getting lost.						
5	There was too much information on certain pages.						
6	There was too little information on certain pages.						
7	More important information was highlighted in some way.						
8	Topic and page headings were self-explanatory.						
9	I had to scroll often to reach the desired information.						
10	The Table of Contents (or Sitemap) was helpful.						
11	The Search feature was helpful.						
12	I received adequate information from the Search feature.						
13	The terminology was understandable throughout the site.						

NORTHEASTERN UNIVERSITY WEB SITE USABILITY TEST
DISCUSSION

NORTHEASTERN UNIVERSITY WEB SITE USABILITY TEST RECOMMENDATIONS

Appendix A

BACKGROUND QUESTIONNAIRE

Name: _____   Company: _____

Job Title: _____

Please answer the questions below in order to help us understand your background and experience.

Age:
(Circle One)   18-30   31-40   41-50   51-60   Over 60

Sex:
(Circle One)   Male   Female

Education: (Please check the highest grade-level achieved below)

    Grade School
    High School
    Some College
    College Graduate
    Post Graduate

    If you graduated from college, please list your major area of study.

    _____

Learning style:

Which way do you prefer to learn?
    Trial and Error
    Consult with others
    Documentation
    Other: _____

Computer experience:

1. How long have you been using a personal computer?   _____ Years _____ months

2. How often do you use a personal computer to complete your daily job tasks?

      _____

3. Please circle the types of computer applications you have used before, followed by the approximate months of experience with each one used.

Application	Months of Experience
Database	_____
Spreadsheet	_____
Word Processing	_____
Desk Top Publishing	_____
Design (CAD/CAM)	_____
Manufacturing	_____
Engineering	_____
Other:	_____
_____	_____
_____	_____

4. Which Operating System(s) do you have experience with?

WINDOWS	_____ years _____ months
Mac OS	_____ years _____ months
UNIX	_____ years _____ months
LINUX	_____ years _____ months
_____	_____ years _____ months

Internet experience:

1. Are you familiar with Internet browsers? If so, which ones? And how long have you used them?

	Years	Months
Netscape Navigator		
Microsoft Internet Explorer		
Mozilla Firefox		
Google Chrome		

Apple Safari		
Opera		
WebTV		
Other:		

2. Which browser do you prefer using when accessing the Internet? _____

3. Are you at all familiar with the Northeastern University Web site?

     (Check One)
     ___ Yes
     ___ Moderately
     ___ A little
     ___ Not at all

4. If at all familiar with the site, how often do you access it? _____

Appendix B

ORIENTATION SCRIPT

Hi, my name is _____. I'll be working with you in today's testing session. We asked you to come in today to help us test how easy it is to use the Northeastern University web site.

You will be performing some typical tasks with this web site, and I'd like you to perform as you normally would. For example, try to work at the same speed and with the same attention to detail that you normally do. Do your best, but don't be all that concerned with the results. This is a test of the web site, and it may not work as you expect. You may ask questions at any time, but I may not answer them, since this is a study of the usability of the web site and we need to see how it works with a person such as yourself working independently.

During today's session, I'll also be asking you to complete some forms and answer some questions. It's important that you answer truthfully. My only role here today is to discover both the flaws and advantages of this web site from your perspective. So don't answer the questions based on what you think I may want to hear. I need to know exactly what you think.

I'd like to assure you that none of the information that we gather here today will ever be released outside of our research team, and your name will never be used in conjunction with your results. For our study we have assigned you an ID number that will be used on all documentation.

While you are working, I'll be sitting here nearby taking some notes and timings. In addition, you and I will be in a room with others observing. The session will also be videotaped for the benefit of those who could not be here today.

Although we don't anticipate any of the activities today to cause you any discomfort, you should know that it is your right to stop any task that makes you feel uncomfortable or overly stressed out. You may quit the session at any time; but remember that you will be compensated only if you complete the session.

Note that during the session I will be unable to answer any questions that would help you accomplish a task; you will need to rely only on the resources in the web site itself for task completion. However, you may ask any questions you'd like now before we begin.

After the session is over, there will be a brief period when you can ask any questions you would like, even about tasks that you were unable to complete.

Before we begin, do you have any questions?

Appendix C

VIDEO CONSENT FORM
Northeastern University – Web Site Usability Test

Thank you for participating in our usability test for the Northeastern University Web site. This is to inform you that we will be videotaping your session for the benefit of our group members who cannot be present and to enable us to review information at a later date. We will greatly benefit from your feedback and appreciate your time. Please read the statement below and sign where indicated. These tapes will not be released outside of our team of researchers, and will only be used for reference in our research.

> I understand that video and audiotape recordings will be made of my session. I grant the usability test group permission to use these recordings for the purposes mentioned above, and waive my right to review or inspect the tapes prior to their dissemination and distribution.

> Please print name: _____

> Signature: _____   Date: _____

POST TEST QUESTIONNAIRE
Northeastern University – Web Site Usability Test

Please answer the following questions based on your experience using the Northeastern Web site.

Legend
SA = Strongly Agree
A = Agree
N = Neither
D = Disagree
SD = Strongly Disagree
NA = Not Applicable

Task Question:

1. Was the language on the Task List you were given, easily understood?
        SA   A   N   D   SD   NA

General On-Screen Questions:

2. The amount of information on the home page was adequate.
        SA   A   N   D   SD   NA

3. Navigation was inherently intuitive.
        SA   A   N   D   SD   NA

4. I was able to move around the site without getting lost.
        SA   A   N   D   SD   NA

5. There was too much information on certain pages.
        SA   A   N   D   SD   NA

6. There was too little information on certain pages.
        SA   A   N   D   SD   NA

7. More important information was highlighted in some way.
        SA   A   N   D   SD   NA

8. Topic and page headings were self-explanatory.

SA A N D SD NA

9. It was necessary to scroll often to reach desired information.

SA A N D SD NA

10. The Table of Contents (or Sitemap) was helpful.

SA A N D SD NA

11. The Search feature was helpful.

SA A N D SD NA

12. I received adequate information from the Search feature.

SA A N D SD NA

13. The terminology was understandable throughout the site.

SA A N D SD NA

14. The pages were quick to load.

SA A N D SD NA

Open-ended questions

1. What did you find to be easy or difficult about this site?

2. What did you like or dislike about the site?

3. What other comments or suggestions do you have (positive or negative) that you think will help us evaluate the usability of the Northeastern Web site?

Overall impression of the site

On a scale of 1 to 10, 1 being the worst, and 10 being the best, how would you rate this site based on what you have seen today? (Circle 1)

1 2 3 4 5 6 7 8 9 10