
Usability Study of www.faculty.umd.edu

1. Introduction

The Faculty Affairs website is intended to serve as the faculty handbook, providing easy access to information of significance to faculty at the University of Maryland. The site includes explanation of procedures and university policy, links for useful forms, and some on-line application / approval systems, for sabbatical leave, the APT process, and others. The site also offers information about best practices in teaching and other areas, such as mentoring.

1.1 The Usability Question

The site was recently redesigned for the first time in five years. Though it was originally thought that there would be funding to pay a consultant to do usability testing and develop a new design, it turned out that the funding was not available, and the project was undertaken by a graduate student with little formal experience of usability issues. Now that the new design has been in place for a month and the most immediate problems have been dealt with, it was felt that a usability study would be in order, for further improvements to the site.

1.2 Areas of particular concern

The site is very content-heavy, with little opportunity for graphics. The content on the site was reorganized when the site was redesigned, with menus that follow a different scheme than the old menus did. So, the user's ability to find the relevant content is of concern. In addition, as so much of the site has to do with university policy and the appropriate procedures for complying with it, it also seemed important to make sure that the text is easy for a user to read and use. Finally, the Faculty Affairs office is trying to develop more interaction with users, through various surveys and response forms, so that aspect of the site will also be tested.

2. Methodology

Subjects were convenience sampled according to their availability to participate in the test. Each subject completed a pre-test questionnaire that gathered baseline information about his or her level of computer experience, browsing habits, and reading habits with long documents. Following the test, subjects completed a post-test questionnaire which evaluated their attitudes toward the website. Subjects were also interviewed.

Due to a series of unfortunate circumstances, two of the subjects completed the usability testing on the same machine, using the same browser, while the third subject used a different machine and different browser. One subject completed the tasks silently, while a second used the think-aloud method and the third completed the tasks with constructive interaction. In every case, the researcher was present while the tasks were being completed.

2.1 Tasks

Tasks for this usability study focus on finding and understanding information, because that is the main purpose of the website. However, the tasks attempt to test the user on several different kinds of information, in several different contexts.

- 2.1 How do you nominate someone for a Distinguished Scholar Teacher award? *This task tests the user's ability to find necessary information, as well as to easily understand the necessary procedures for a particular action.*
- 2.2 What are the procedures for getting Family / Medical Leave? *This complex form of leave involves a number of administrative steps. Also, there are several forms to be completed, so this task again tests how easy it is to find information, and how easy the information is to comprehend.*
- 2.3 What kinds of information should be included on your syllabus? *This is an example of information from the best practices section of the website. Is it clear?*
- 2.4 How does the university define "adjunct" faculty? *This task focuses on the website's explication of university policy.*
- 2.5 How will maternity or adoption leave affect your tenure review? *This task asks the user to find information and then interpret it.*
- 2.6 What do you think about having the university set up a faculty club? How can you share your thoughts? *This task tests one of the interactive functions of the website.*
- 2.7 What kind of information is available to faculty members about mentors and mentees? *This is another task related to best practices.*

3. Observations

Data for this usability study was collected through observing the subjects as they completed the tasks, and through their responses to the post-test interview and questionnaires. In various ways, both these methods provide useful data about the usability of the site.

3.1 Participant Information.

As noted above, participants in this study were recruited through convenience sampling, following an email appeal. One of them had seen the site previous to the test, but the others were completely unfamiliar with it. Based on the pre-test questionnaire, all the participants use computers often and are very familiar with the Internet. All identified themselves as confident about their ability to discover information on an unfamiliar website. They also identified themselves as regularly searching for information online. All also said they were accustomed to reading long complex documents online, rather than on paper.

3.2 Observational Data.

All three participants were challenged by the fact that the website is designed to be of interest to tenured and tenure-track faculty at the University of Maryland, while none of the participants fit that criteria. The information on the website has been collected for the benefit of UMD faculty, and it is organized in ways that would likely make sense to faculty. For example, most tenure track faculty are familiar with the idea that there are various reasons for postponing one's tenure review, but the study participants had difficulty understanding what they should be searching for to answer a question about tenure delay. Similarly, tenure track faculty at the University of Maryland are given a copy of the guidelines for Advancement, Promotion and Tenure during their first few weeks, and can be presumed to know the process by its initials, but one of the study participants, while hunting for the tenure delay information, exclaimed "apt?" – pronouncing it as an adjective.

Study Design Issues. The tasks outlined for this study were either too easy or too difficult. Every participant had to be guided to complete one of the tasks, and each participant had a problem

with at least one other task. However, other tasks were completed in under a minute. One of the study participants completed all the tasks by using the search box that is a part of the University website wrapper, so that participant actually made no use of the site's navigation.

Site Design Problems. Study participants had a number of comments about the way the site is designed and how that challenged its usability. Two participants commented that the menus were in too few categories. One participant commented that he might have expected the menus to run down the left hand side instead of across the top. For one participant, the links were not adequately visible. All the participants commented that one question – the question with which they all had the most difficulty – asked them to look for information in a way that seemed unusual to them. Finally, one of the participants commented that there was no clear stylistic link between the highlights on the index page and the content deeper within the site that was being highlighted. As this participant put it, “I wouldn't know where to look for more detail.”

On the other hand, all study participants were positive about the website when asked to assign it a grade in the post-test interview, though of course that might have been attributable to the fact that they knew their interviewer was the designer of the website. All three graded the site B on a scale of A through F. A generalization of their comments would be that the site design is nice but not perfect. One participant commented, “for a University website, I was actually very impressed at my ability to find the information. I've done a lot of searching around Maryland's websites and generally it's a teeth-pulling experience.” A second participant also commented on the relative ease with which information could be located.

4. Interpretation – strengths and weaknesses

4.1 System strengths.

Because this site has a very familiar, traditional design, the study participants were mostly able to find information where they expected to find it. Further, the organization of information on the site has been refined over the course of a year, so it is now organized in a way that will generally make sense even to someone who is entirely unfamiliar with the context. Through that organizational scheme, a great deal of information is available to the user, with explanation of procedures, links to forms for download, and links to online surveys and forms.

4.2 System weaknesses.

Perhaps the central weakness of this site is that it was designed by someone with no training in website design. In consequence, the design includes certain quirks which might not be found in a site that was more professionally rendered. One of the participants pointed this out with a comment about how the headlines and body text didn't seem hierarchical, and thus made it more difficult to find information on a page. The comments that study participants made about the menu organization are also indicative; the menu choices were made for design purposes, rather than for usability.

Another significant weakness of the site is how content-heavy it is. As noted above, the site replaces the faculty handbook. There is little opportunity to add graphics to the site, and it's difficult to identify logical breaking points for pages. That makes it challenging for most users to find information in a page.

5. Suggested Improvements

In general, the Faculty Affairs website accomplishes its mission, which is to make information on a range of topics available to faculty members and administrators. However, as noted above, there is room for improvement.

- 5.1 **Fonts.** Though fonts are styled to include extra spacing for readability, greater use of pull quotes and other styling elements would make the text easier to read. Additionally, though none of the study participants commented on this, the font sizes are specified in the CSS file, which could make the site difficult for a vision-impaired person to read.
- 5.2 **Headline styling.** While the first three headline tags follow a pattern, H4 and H5 do not, as one of the study participants commented. All these headline tag styles should be brought into alignment.
- 5.3 **Links.** Links will be more visible with the addition of the traditional underlining. Currently, links change color on hover, but to a color-blind individual, or just someone in a hurry, a link could be confused with a headline.
- 5.4 **Menu organization.** As all the study participants noted, menus could be reorganized for greater ease of use. As one study participant commented, “menus within menus – drop-down menus within drop-down menus – is irksome.”

6. Conclusion

As noted above, the Faculty Affairs website is moderately usable. Information is organized in logical ways, at least to users who are familiar with the context. The site is also visually appealing, and navigation, while far from perfect, is at least consistent. However, the site assumes a user who is familiar with the content; more care must be taken with design to help the users who are not familiar with the content.

Appendix I: Comparison of Different Techniques

This study made use of three observation techniques: the silent observer method, the think aloud method, and the constructive interaction method. These observation techniques are so familiar that any definition seems unnecessary. In every case, the study was somewhat hampered by the researcher’s inexperience.

Of the three, the silent observer method is the closest to real life, as this is the way we all commonly interact with websites. However, in the case of this study, it was necessary to offer a hint with at least one of the questions, which seemed to derail this observation. The think aloud method is probably the most artificial observation, but with a good study participant – such as someone who is accustomed to articulating the problems and challenges of web design, a researcher can develop a wealth of useful information. The constructive interaction method also produced useful information, without being quite so artificial, as it gave the researcher the opportunity to participate in the tasks, and to hear the study participant’s reactions in real time.

Appendix 2: Questionnaires

Pre-Test Questionnaire

1. What is your age? ____ Gender? ____

Please circle the appropriate answer for each of the following questions:

2. How frequently do you use a computer?
 - a. Several times a day
 - b. A few times a day
 - c. A few times a week
 - d. A few times a month
3. What platform do you most commonly use?
 - a. Apple
 - b. Windows
 - c. Other
4. What kinds of software have you used? Please circle all that apply.
 - a. Word processing
 - b. Spreadsheet
 - c. Presentation
 - d. Database
 - e. Other
5. How frequently do you use the Internet to search for specific information (as opposed to scanning a newspaper or checking your facebook page)?
 - a. Several times a day
 - b. At least once a week
 - c. Several times a month
 - d. A few times a month
6. What kinds of information do you look for on the web (circle all that apply)?
 - a. Information for work
 - b. Information for school
 - c. Consumer information
 - d. Entertainment information
 - e. Other
7. If you are looking for legal information or information about policies and procedures, would you be more likely to look
 - a. online
 - b. for a paper document
 - c. elsewhere

Please explain your choice:

8. If you have to read a long document, such as a journal article or a legal document, do you prefer to read it
 - a. on a computer
 - b. on paper

Please explain your choice:

9. Have you ever visited the UMD Faculty Affairs Website?
 - a. Yes
 - b. No
 - i. If yes, how recently?
10. Rate your confidence level about finding information on an unfamiliar website:
 - a. Very confident
 - b. Moderately confident
 - c. Not very confident
 - d. Unconfident

Post-Test Questionnaire

Please rate the following items using a scale of 1 to 5, where 1 is your strongest agreement and 5 is your strongest disagreement:

1. The site is attractive.
2. The site's graphics are pleasing.
3. The site has a good balance of graphics versus text.
4. The colors used throughout the site are attractive.
5. The typography (lettering, headings, titles) is attractive.
6. The homepage's content makes me want to explore the site further.
7. It is easy to find my way around the site.
8. I can get to information quickly.
9. It is easy to remember where to find things.
10. Information is layered effectively on different screens.
11. Information is easy to read.
12. Information is written in a style that suits me.
13. Screens have the right amount of information.
14. The information is relevant to my professional needs.
15. The site is well-suited to first-time visitors.
16. The site is well-suited to repeat visitors.
17. The site has a clear purpose.
18. It is clear how screen elements (e.g., pop-ups, scrolling lists, menu options, etc.) work.

Do you have any other comments about the site?
