



Tisch Library Web Team

# Tisch Web Team Ethnographic Research Study

<b>Tisch Web Team Ethnographic Research Study</b>	<b>2</b>
<b>Introduction</b>	<b>2</b>
<b>Methodology</b>	<b>2</b>
Interpreting the data:	<b>3</b>
<b>Findings</b>	<b>3</b>
Dashboards of Results	<b>3</b>
<b>Qualitative results</b>	<b>5</b>
<b>Redesign implications</b>	<b>6</b>
Value beyond Web Design	<b>6</b>
Beta's page	<b>7</b>
<b>Addendum</b>	<b>7</b>

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## Introduction

In designing or redesigning a website, there is no substitute for direct interaction with the core audience intended to use the site. Knowing what pages/resources users are accessing the most is relatively simple. We have web statistics software to aid with that. Knowing how users are actually making use of these resources is another matter. To that end and inspired by work done at MIT and at the University of Rochester River Campus, the Web Team has embarked on its first ever ethnographic study of how students seek information.

At MIT, Nicole Hennig and her team tracked the research habits of 16 undergrads and 16 grads over a one-week period. The participants agreed to keep thorough diaries of what they did and when they did it. Included in the diaries were note cards and screenshots. Afterward, they submitted to an interview. Librarians and staff at the University of Rochester River Campus have employed this process on a larger scale and to great effect. The goal of their two-year project was to discover how undergraduates write papers and do research based assignments (see <http://tinyurl.com/f63dj/> for more information). We were in consultation with staff members of MIT and Rochester in the formation of this project.

## Methodology

For our purposes, we engaged in an ethnographic study of how 15 undergraduate and 7 graduate students conduct research. Students were paid \$100 for their participation and were recruited through an email sent via the dean of students' distribution lists. For the undergrads, we sought students from each class and a mix of disciplines. We bought them journals and asked them to write in them each time they had to do research for a class or project. We then followed up with an interview of each of the students. To allow for review and interpretation of the collected data, each member of the team typed both the journal entries and their interview notes into an Access database created for the project.

Email was sent out to recruit students for the study-identifying year and major so as to assemble a group of students representing all possible levels of experiences and major disciplines. The response was amazing. We got 248 responses. Laura and Thom gave the students an orientation on March 2nd about the study-Laura about their task in the study; Thom on the use of the collected data. Team members' business cards were given to students as contacts during the study and for later interviews. Students recorded their information seeking activities related to their academic life during the week of March 4th, two weeks before Spring Break. Members of the team conducted interviews with the students during the week of March the 12th through the 16th. At these meetings, each of the students was asked the following questions:

1. Did you learn anything about your information-seeking activities that surprised you?
2. Did you see any patterns emerging, any things that you find you do consistently?
3. What problems did you run into when you were looking for information?
4. What worked particularly well for you?
5. Do you think this was a typical week for you or are there other tasks that you normally do that you didn't do this week? Can you tell me about them?

After asking the questions, we went through, with the student, his/her journal. The objective here was to make sure we understood everything, could read all the handwriting, and to clarify and ask for more information where needed.

The studies done at MIT and University of Rochester River Campus were consulted throughout the whole process.

### Interpreting the data:

After entering the data into an Access database, we charted emergent patterns relating to the tasks performed by the students and the methods they chose to accomplish their tasks. The complete transcriptions of the journal entries as well as interview notes for each participant are available online at the [Web Team ethnography website](#).

## Findings

### Dashboards of Results

#### Comparison of Tasks

Task	Number of Occurrences
<b>Undergraduate Tasks</b>	
Do coursework	260
Go directly to a known URL	140
Do a topical search	130
<b>Graduate Tasks</b>	
Do a known item search	142
Do a topical search	58
Do coursework	42

**Comparison of Methods Used by Students**

Method	Number of Occurrences
<b>Undergraduate Methods</b>	
Google	58
Read assigned print materials	36
Go directly to a known URL	34
Consult other Tufts students	29
<b>Graduate Methods</b>	
Search library catalog	23
Google	22
Search a subject database	19

**Cross Tabulation of Undergraduate Methods and Tasks**

Method	Task	Number of Occurrences
Google	Known item search	21
	Topical search	20
Read assigned print readings	Coursework	33
Go directly to a known URL	Known item search	10
Consult other Tufts students	Coursework	27

**Cross Tabulation of Graduate Methods and Tasks**

Method	Task	Number of Occurrences
Search library catalog	Known item search	20
Google	Known item search	13
Search a subject database	Topical search	10
	Known item search	9
Go directly to a known URL	Known item search	5
	Fact/Quick Look-up	4

The complete breakdown of tasks, methods, and cross-tabulations are available online at <http://www.library.tufts.edu/tisch/staff/WebTeam/ethno/index.html>.

**Qualitative results**

We gained great insight into the ways in which students integrate web resources into their academic experience and into how they use (or don't use) our resources.

- Many students use Wikipedia as an adjunct to their assigned text books. If the explanation of a concept is too hard to grasp in the textbook, they will use Wikipedia for a more accessible definition or explanation.
- Students also use Wikipedia and Google to help them identify keywords that they later use in more academic databases to retrieve material.
- Students use Google because they like the one box search. Some students expressed the fact that with so many databases available it is difficult to know which one to select, and it is easier to use the one box.
- The language of the site does not match the language of students. The Research Guides by Subject is a good example. The majority of students are not drawn to this classification heading even though it does contain the content they are looking for. The 'guide' object reference is not proving to be the appropriate lure or signpost here. A drop down menu preceded by the question 'What's Your Major?' might bring students into these resources much more often.
- Students do not know what resources we have. We saw evidence of students paying to read the New York Times and The Economist online not knowing that we already pay for them.
- Students, especially those in the social sciences, check news blogs on a regular basis.
- Students are looking for quick access to materials like dictionaries, encyclopedias, and newspapers.
- Students in the sciences would like access to a web page of links to basic fact finding materials.
- Students are not aware that they can request that the library purchase materials.

- 'Go to known url' is a very common search method.
- Some students have a negative view of ILL from second-hand and third-hand observations. They are not aware of how speedy ILL is.
- Students use tuftslife.com to get to many Tufts and Tisch resources.

## Redesign implications

What we did NOT find is that there are essential resources that students need that we don't provide. In fact, we make available from our website most of what they require. The results of the study suggest that we must do a better job in presenting and delivering these resources, making them easier to find.

### Some of the ways that we might do this are:

- Create a 'What's Your Major' widget or 'academic corners.'
- Provide top level links to heavily used resources like dictionaries, encyclopedias, and newspapers.
- Add course-specific handouts, guides, tutorials to such categories as Subject Guides, Academic Corners, and What's Your Major
- Create a science tools page that links to ready reference science materials.
- Develop a current news blogs page.
- Create a 'Did You Know' section on the top page to promote services and collections. For instance, "Did you know that the average ILL turnaround time is 2 days"; "Did you know that you can recommend a purchase for the Tisch Library." The content would change monthly.
- Integrate Ajax based technology such as LibX, and similar plug-ins for the Firefox web browser, developed by UIT (a Tufts in-house development team) to imbed the library in favorite outside sources such as Amazon.com and IMDB.
- Give Encore and Research Pro prominent real estate on the Tisch web page since it provides the one-box searching preferred by students.
- Create more online educational material comparing subscription encyclopedias to Wikipedia, i.e., "If you like Wikipedia, you'll love the Encyclopedia Britannica."
- Consider the list of the most searched urls and decide whether and how we should provide access to them from the Tisch website. (See addendum for the list of known urls.)
- Increase integration with tuftslife.com.

## Value beyond Web Design

We have found, as MIT did, that much of the data is valuable beyond web design. The instruction librarians are analyzing additional ways in which the transcripts can augment our understanding of students' information seeking process and ways and what we can do to improve it. The bibliographers are studying the journals to see how they might incorporate

comments into collection development. For example, science students are very interested in textbooks. Should we reconsider our policy of not collecting textbooks and build a small core collection of textbooks?

The Marketing and Communications Specialist is also reviewing the material to see which services and resources should be more widely publicized.

## Beta's page

In addition to the improvements to the site that we can make based on our current resources, we are considering how to introduce future technological features such as Encore and Research Pro. One possible solution is to introduce the new features as part of a 'betas' page so we can get early feedback from students eager to use this new technology.

In addition to Research Pro and Encore functionality, we could use a betas page to introduce recent developments such as the aforementioned Firefox plug-ins for accessing library services/Amazon and IMDB link to catalog. This would also serve as a great way to introduce and get feedback on alternative means of displaying content on our site. There are a host of AJAX based user experience design strategies that are showing up on sites such as yahoo, Amazon, etc. in response to this recent innovation in web technology. Examples of this include tabbed and accordion strip (expand/collapse regions) content interfaces.

## Addendum

The 23 url's (in addition to Wikipedia.org and Google) that showed up in the journals:

- <http://www.cnn.com>
- <http://www.webmd.com>
- <http://www.un.org>
- <http://www.xreference.com>
- <http://www.yellowbooks.com>
- <http://maps.google.com>
- <http://www.citysearch.com>
- <http://www.mhc.com>
- <http://www.wordreference.com>
- <http://www.sparknotes.com>
- <http://www.allposters.com>
- <http://www.1800-homeopathy.com>
- <http://www.randomhouse.com>
- <http://www.weather.com>

- <http://www.imdb.com>
- <http://www.msnbc.com>
- <http://www.dictionary.com>
- <http://www.msn.com>
- <http://www.pubmed.com>
- <http://www.who.org>
- <http://www.doostang.com>
- <http://www.youtube.com>
- <http://www.facebook.com>