

2011 Digital Scholarship Study: an Executive Summary

MIT Libraries User Experience Group, October 2011

In the spring of 2011, the User Experience Group (<http://libguides.mit.edu/content.php?pid=110460&sid=1117257>) with help from several librarian liaisons, conducted a study of the needs of the MIT community. In particular, this study focused on how new technologies and formats are having an impact on how MIT scholars find, use, and share information for their study, research, and publishing.

(For further information, contact Lisa Horowitz, lisah@mit.edu.)

Method

The group worked with 17 volunteers:

- 7 undergraduates
- 7 graduate students
- 1 affiliate, 1 postdoc, 1 TA

All three main disciplines at MIT were represented (Science & Engineering, Arts & Humanities, Social Sciences & Management).

Volunteers recorded their own research behavior over the course of a one-week period using their own digital camera and taking notes in any format they wished. Our staff then conducted in-depth interviews of each participant.

Caveats about Ethnographic Research

It's important to keep in mind that this kind of research is qualitative and contextual. It explains why people act a certain way, and adds information to a picture that might be obtained from a broader quantitative study. Generally, the information gathered either corroborates data from other sources, or it leads to new areas of questioning. It is not, nor is it intended to be, a statistical sample. The data cannot be extrapolated, but can be used as a basis for further questions.

Learnings, Themes and Insights

The interviews were based on categories of questions, which came from our initial goal of understanding how new technologies are impacting the MIT community's research and work practices. The notes, diaries and interviews were then categorized into "learnings" — what stood out in the interviews and represented the "story" that we were trying to learn about. These led us to develop four themes. Within these themes, we then identified a number of "insights" — perspectives that we did not already know about, or discoveries beyond what we did already know that allow us to understand in a new way. The following outlines the categories of our learnings, themes and insights.

In our interviews, we focused on these categories:

- Formats
- Collaboration
- Publication

- Storage
- Technologies
- Awareness
- Help
- Spaces
- Changes over time
- Obstacles and pain points

The categories of learnings were then restructured into four themes (<http://libguides.mit.edu/loader.php?type=d&id=610970>):

- Convenience
- Fragmentation
- People/Expertise
- Place

Theme: Convenience wins.

The theme of convenience is one we already know. Users want everything to be convenient. Our insights expand on that.

- Users rely on familiar sources, technologies and features.
- Convenience wins out against almost all other factors.
- Pen and paper continue to have advantages over technology in certain situations.

Theme: Fragmentation hurts.

- Information overload alongside multiple storage solutions spawns fragmentation. It's hard to keep track of versions despite technology, and files are stored across formats and locations, making it hard to organize them systematically.

Theme: People count.

- Collaboration means more than we expected. It means group work, but can also mean working individually toward a single shared product, working with people outside your discipline, or just working together on separate things.
- Expertise is sought when asking for help, but familiarity or a referral is often what defines who is asked.

Theme: Place matters.

- People appreciate the unique features of the places they choose to work.
- A user's physical and emotional needs at any particular moment contribute significantly to the place they choose to work.
- Motivation is found in studying around others, working "alone together."

Research at other academic libraries

User research at other academic libraries* shows similar patterns. Here are some themes based on user needs studies done at University of Rochester, Yale, Cornell, and Ohio State.

1. Habituated search paths
2. Inflexible systems are a researcher's "cross to bear"
3. Too many results
4. Technical troubles with access
5. Getting things when and how they want
6. Organizing notes in personal libraries – many different methods

* From: *Scholarly Practice, Participatory Design and the eXtensible Catalog* (<http://www.amazon.com/Scholarly-Practice-Participatory-eXtensible-Catalog/dp/0838985742/>), by Nancy Fried Foster, et al.

Next steps: "How might we?" questions

According to the practices of design thinking,** a next step is to ask questions in the form of "how might we?...."

Here are a few questions that this research suggests.

A. Convenience wins

1. How might we make our services as convenient as possible?
2. How might we showcase our services, librarians, and spaces by highlighting how convenient and easy they are to use?

B. Fragmentation hurts

1. How might we reduce fragmentation in the resources and tools that we provide?
2. How might we inform/educate our users of current solutions that exist to help avoid fragmentation?
3. How might we make our tools interoperate with the primary tools that people use? (Dropbox, Instapaper, Google Docs, Evernote, Refworks, Zotero, etc.)

C. People count

1. How might we enable people to connect to the experts they need?
2. How might we facilitate collaboration across & between disciplines?
3. How might we connect our tools to individual scholar-centric views? author-centric views?

D. Place matters

1. How might we market the unique features of each of our spaces?
2. How might we design services & spaces with more attention to people's physical/emotional needs?

** From *Design Thinking Toolkit for Educators* (<http://www.designthinkingforeducators.com/>).