How Are They *Actually* Using It?
Assessing User Behavior in a New Library Space

Virginia Bach, Philip Dudas, Ashley Merrill, and Kaia Sievert
University of Minnesota Libraries - Wilson Library Access and Information Services

Abstract

In the fall of 2014, Wilson Library, located on the University of Minnesota's Twin Cities campus, remodeled an outdated first floor lobby that was no longer meeting user needs. The following semester, the Wilson Access and Information Services (AIS) department selected Suma, an open-source, mobile-friendly data collection tool to assess patron usage of the renovated space. In order to capture actual user behavior in real time, AIS staff used Suma to collect headcount data that included furniture preferences, technology use, individual vs. group work, and activity type for six selected weeks between February 2015 and April 2016. Results showed that the average lobby user was studying alone using headphones, a computer, and print materials, and that lobby users tended to spread themselves evenly throughout the space.

Project Overview and Goals

The O. Meredith Wilson Library is a six-floor library located on the West Bank of the University of Minnesota in Minneapolis. The library primarily holds materials for the arts, humanities, and social sciences. In the summer and fall of 2014, the main user spaces on the first floor were renovated--positioning a recently combined reference/circulation desk in the line of sight for visitors entering the building and coming down the stairs. Additionally, new seating, booths, stools, tables, plug-ins, as well as display monitors and a multicomputer collaboration screen were added to create spaces for study and collaboration.

In order to continually improve user experience and inform future space projects, a small group from Wilson AIS was tasked with assessing the new lobby throughout the first year. The team selected an open-source assessment tool called Suma to capture user data in real time, and to paint a clearer picture of trends in lobby use.

About Suma

"Suma is an open-source tablet and web-based assessment toolkit for collecting and analyzing observational data about the usage of physical spaces and services, developed at North Carolina State University Libraries. The tool streamlines existing data collecting activities, enables fast, hassle-free mobile data collection, provides sophisticated data analysis and visualization capabilities for non-technical users, and promote observation data analysis as an integral part of service and space design and day-to-day planning."
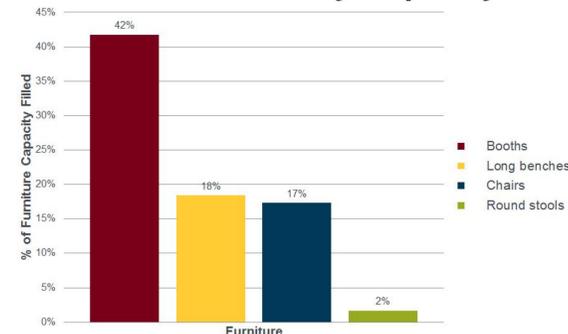
from NCSU Libraries. (n.d.) *Suma: An open-source, mobile tool enabling observational data collection and analysis* [Brochure]. Retrieved from http://www.lib.ncsu.edu/sites/default/files/files/pdfs/suma_handout.pdf
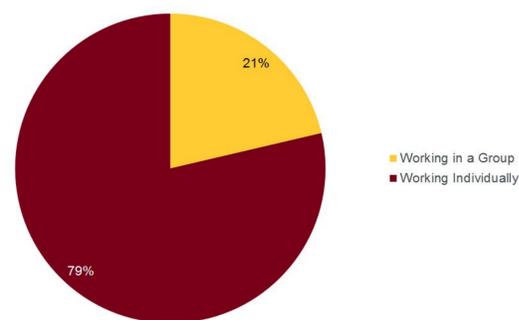
Process

- Libraries' Technology Lead downloaded Suma from GitHub and set it up on a test server and a MySQL database.
- AIS goal group members input the selected assessment criteria and lobby locations into Suma.
- Two weeks in the middle of each semester were chosen to collect data and relevant library staff were recruited to help.
- Every other hour, library staff took an observational data "count," which included technology used, furniture type, activity, location in lobby, and individual study versus group study.
- Following each semester, data were analyzed in Excel and reported to staff.
- In response to feedback from staff, the goal group created a user guide to improve consistency among counts.
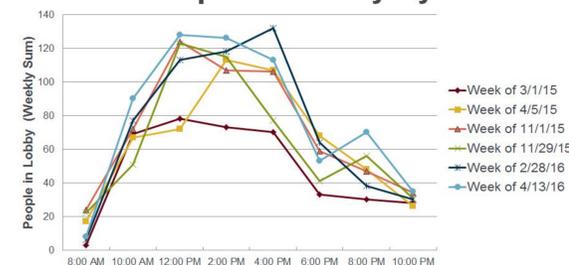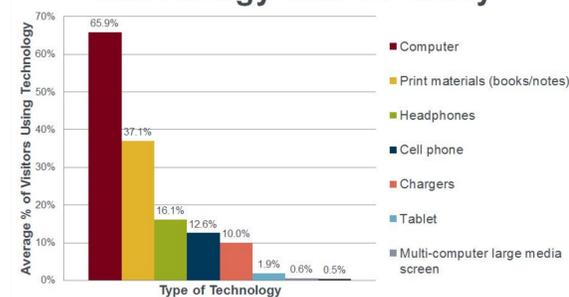
Results

Furniture Use by Capacity

Booths: 42%, Long benches: 18%, Chairs: 17%, Round stools: 2%

of People in Lobby by Hour

Week of 3/1/15, Week of 4/5/15, Week of 11/1/15, Week of 11/29/15, Week of 2/28/16, Week of 4/13/16

Individual vs. Group Work

Working in a Group: 21%, Working Individually: 79%

Technology Use in Lobby

Computer: 65.9%, Print materials (books/notes): 37.1%, Headphones: 16.1%, Cell phone: 12.6%, Chargers: 10.0%, Tablet: 1.9%, Multi-computer large media screen: 0.6%, 0.5%

Challenges and Limitations

- The data collected rely on observation. We could not get data by user type/affiliation, and several of our categories relied on the counter's judgement (e.g., are they studying?)
- Data collected are strictly quantitative. We can see *how* visitors are using the space, but cannot get to the underlying *why* questions. For example, why weren't visitors using the monitors? Why were visitors using collaborative spaces for individual study?
- As this was our first time using Suma for data collection, this was treated as a pilot project. As a result, our data was not as clean as it could have been, due to missed counts, technology glitches, and at times, unclear criteria.

Key Findings

- On average, our data show the typical lobby user is studying alone with headphones, a computer, and print materials.
  - 60-70% of visitors had their own laptop, but tablet use was low (less than 3%).
  - 30-40% of visitors had print materials (notebooks, books, etc.).
  - The proportion of group work increased as the semester progressed (with one exception), but individual study still accounts for 70-80% of use.
- The round stools were almost never used compared with all other furniture types. Booths were the most popular seating option.
  - While visitors showed preferences in furniture choices, they tended to disperse themselves evenly throughout the lobby.
- Several special features in the lobby were underutilized, specifically the display monitors and the multicomputer collaboration screen.

Lessons Learned

- Collect data prior to a renovation, in order to have pre- and post-project data for comparison.
- If at all possible, try not to miss counts.
  - If you schedule many counts per day, you may end up with messier data due to missed counts. Instead, focus on a few counts during core business hours.
- Suma has a dashboard to visualize data, but is not set up to compare multiple sets of data together (e.g., comparing one week to another week). This comparison requires exporting the data to Excel for analysis.
- Have a shared mobile device available for staff to use.
- What is clear to the planning group might not be clear to those taking a count. Make a guide with definitions and photos of areas/furniture.
- Tracking activity type (e.g., doing homework, socializing) was highly subjective and did not yield any useful data.

Impact

Ultimately, the goal group was able to draw conclusions that resulted in small shifts in lobby configuration that improved user experience and will help inform future capital planning. Data indicated user preferences for semi-private spaces, seating with back support, and a table for their computer and other materials.

Wilson Library is currently undergoing several space planning projects, including a repurposing of our reference room. Key findings from the lobby assessment were used to design a streamlined pre-assessment, as well as inform furniture purchases and other design decisions for this space. These findings will also be used alongside qualitative user experience data to inform a potential building-wide redesign.

This poster and additional resources available at:
z.umn.edu/sumaposter

+suma

LIBRARIES
UNIVERSITY OF MINNESOTA