March 29, 2016
This report includes findings of the test furniture study done between February and March 2016. The study included observations and direct feedback from students.

Major Findings

Positive Reaction from students:

Students were asked to provide feedback on the test furniture. Initial analysis of comments showed approximately 80% were positive, 15% were negative, and 5% were both positive and negative (e.g. “The green chairs will not last… tables with outlets are cool.”). Student comments became more positive further into the furniture study. Comments and usage consistently showed students’ heavy use of and need for outlets. Comments that did not relate to the study were recorded, but were not included in the analysis (e.g., political comments, building temperature).

Usage of furniture by time of day:

Patterns appeared in the usage flow of the test furniture over the course of the study. The plain low tables and outlet tables received the highest use out of the test furniture table options. See pie chart, page 3 (furniture usage by time of day) for a visual comparison.

Morning trends (8 am and 11 am): students engaged in individual study activities, heavily utilizing the existing furniture and desktop computers.

Afternoon trends (2 pm): usage increased with mostly individual study and some group study intermixed. The most heavily used furniture during the afternoon hours were: the Brodys, existing wooden tables, low outlet tables, and the high top table.

Evening trends (5 pm and 8 pm): students shifted to group work (which included both individual work with friends nearby, and shared group work). There was more breadth in furniture usage; students used all types of furniture except for the high collaboration table (with the USB ports and monitor). White boards were also very popular.

Late night trends (11 pm): usage reverted to mostly individual work, with low usage overall. Students once again preferred to use the existing wooden tables and computers provided.
Changes in the use of furniture over the study:

Students moved furniture to suit their study needs by the third week of the observation study. This indicated that students eventually felt comfortable with the furniture, and adapted the test furniture to best fit their study needs. Students moved chairs more than tables. Wheeled chairs and wooden chairs were swapped or added to other tables to provide more seating for larger groups. Rocking stools were mostly used as footrests in the Brodys. Observations showed students preferred lower tables over the high top tables. Students also used the whiteboards heavily for group work, but also used them on occasion as a divider between different furniture areas. White boards consistently migrated to the low test tables. See the heatmap figure, Average use per seat, on page 4 for a visual comparison.

Specific Details on furniture usage from photo observations

Brodys were the most popular test furniture used from the testing options (96 observed users, 16% of total usage). The three highest usage categories (after Brodys) were tables. Students favored tables that provided more access to outlets and space to spread out. A usage by furniture type pie chart showing a visual representation is on page 5.

1. Tables/furniture:
   a. The existing wooden tables were the highest-used category of furniture overall (338 observed users, 55% of total usage).
   b. The low outlet tables and plain low tables received equal usage from the photo observations (low outlet tables 64 observed users, 11% of total usage; plain low tables 60 observed users, 10% of total usage).
   c. High top tables had 20 observed users (3% of total usage).
   d. The low collaboration table had observed usage 15 times (2% of total usage), typically for individual study, not for the intended collaboration.
   e. The brainstorm table (mushroom shaped with rocking stools) only had one observed user (.02% of total usage), but students from a period research group doodled on the paper.
   f. The high collaboration table was not used during observation times. It appeared students were not interested in using tables facing walls.

2. Chairs:
   a. The green chairs had the highest usage of all test seating options. These chairs received many positive comments.
b. The red and gray chairs had many positive comments regarding comfort, but low photo-documented use. Students moved these chairs to other tables to provide more group work seating.

c. The blue lounge chairs had many positive comments, but low documented use. Students and other patrons used these chairs primarily in the late afternoon and evening hours, typically in conjunction with studying.

d. The rocking stools received mostly negative comments and had very low use. They were used as Brody footrests rather than seating.

e. The white high-top stools received almost exclusively negative comments regarding their weight. They received very low use (photos show some students preferred standing).

Graphs & Heatmap

Furniture usage by time of day:
Average use per seat:

Submitted by Elisabeth Tessone and Laura Horne-Popp to the JCKL Space Utilization Committee, 3/29/2016
Usage by furniture type:

- Old wired tables, 338, 55%
- Low outlet tables, 64, 11%
- Brodys (electrical), 96, 16%
- High top, 20, 3%
- Low collabtable, 15, 2%
- Soft blue seating, 16, 3%
- Core stools (& brainstorm table), 1, 0%
- High collabtable (w/ monitor), 0, 0%
- Plain low tables, 60, 10%

Student Comments and Photo Observations

Student comments have been recorded here: https://docs.google.com/a/ucmo.edu/spreadsheets/d/1SV4ZrRJIQe_fGtKxTZIGNCVEgB1GXiVwCQyivTKFFOo/edit?usp=sharing

Photo observations are saved on an internal drive.

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