Abstract (deliverables)

For this project, our group had to run various tests in a Cudahy library study space called the “Stack Decks”. By the end, our sponsor expected data which correlates various factors with the overall perception of the space, along with suggestions for a redesign.

Methods – Test 1

For our first round of testing we created 3d models of various room layouts which had a few high/low value combinations of four factors: Chair Density (number of chairs per floor), Soft to Hard Seating Ratio (couches vs desks), Walking to Seating Ratio (Space Utilization), and Color Temperature of Lighting (°K).

We ran a survey to see which combinations people preferred, and used 2K factorial analysis to figure out which factors were most impactful. What we found was that changing the chair density and the ratio of hard/soft seating had the greatest effect on overall appeal.

Methods – Test 2

For our second round of testing we reconfigured two of the floors of the stack decks to compare the remaining factors. We gave one floor equal amounts of soft and hard seats, and high seating density. We gave the other floor a low soft to hard seating ratio, and a medium chair density. This way we could see which of the two remaining factors was most important.

Floor C

Floor E

We then ran one more survey to compare these configurations.

Results

After surveying students who got to try out both of our new designs, we learned that a floor with a high soft to hard seat ratio, medium chair density, and a medium walking to seating ratio was extremely well received.

Discussion

From the additional feedback on our survey, we know that something that turns people off from the stacks is the ominous feeling given off by the cage surrounding the bookshelves. To solve this in a final implementation of our solution we would like to find a way to cover it.

If we had the budget required, another important factor we would look more into color temperature and brightness, something considered by many scientists to be important for concentration and creativity.

References