

# Add It Up: Using Data to Make Informed Spatial Decisions

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## INTRODUCTION

In 2016, Marian University's library began collecting data on how patrons utilized our building. We conducted student surveys, held focus groups, and collected spatial data using Suma, an open-source assessment toolkit.

In 2019, in response to the student surveys, the library began upgrades to our building including new furniture and additional technology. We utilized results from Suma studies to make evidence-based decisions about where to focus our improvements.

## ABOUT SUMA

- Suma is an open-source mobile web-based assessment toolkit for collecting and analyzing observational data about the usage of physical spaces.
- Suma was created by NC State to assist in collecting data in areas traditionally difficult to access such as use of physical space.
- Suma provides data analysis and visualization capabilities to aid in space design and day-to-day planning.

## OVERVIEW

For one week in the spring, student workers used Suma to conduct an hour-by-hour assessment of how individuals used the library during a representative week. We repeated the process in Fall 2019 after upgrades were made to determine if there were changes in usage.

## DATA COLLECTED

- Areas most utilized
- Overall computer usage
- Student carrel usage
- Computer usage by area

## DATA USAGE

The information we gathered from these assessments have been used to make informed decisions about the following:

- Hours
- Furniture improvements and placement
- Technology arrangements
- Location of noise cancelling devices

## PROCESS

Undo last count | Abandon Counts | Finish Collecting

Select a collection program:  
Spatial Use

Tap on a location:  
Hackelmeier Memorial Library

1st Floor  
2nd Floor  
3rd Floor  
Basement

Leisure/Graphic Novels  
Media (DVDs/CDs)  
Reference  
Current Periodicals  
East Table Area  
Open Computing  
Central Table Area  
Printer Area  
Collaborative Space  
Bound Periodicals

Spatial Use

Individual Use | Active Groups  
Dry Erase Board | Using Wall Monitors - 2nd floor  
Charging Devices | Browsing Stacks  
At Study Carrel | FitBike

Count

Suma provides the ability to tailor your experience to your institution's needs. For our library, we broke down data points into the following categories:

- Designated floor
- Area within the floor
- Activity in that area (e.g. independent study, working in a group, browsing the stacks)

## CONSIDERATIONS

- When picking a typical week, pick one away from midterms, finals, and holidays.
- Changing physical locations of items means comparisons may not be consistent from year to year.
- Clearly define areas to assess, choose logical names, and create a map to help those collecting data know boundaries.
- Data results in Suma do not easily connect activity with space use. Further data manipulation may be required.

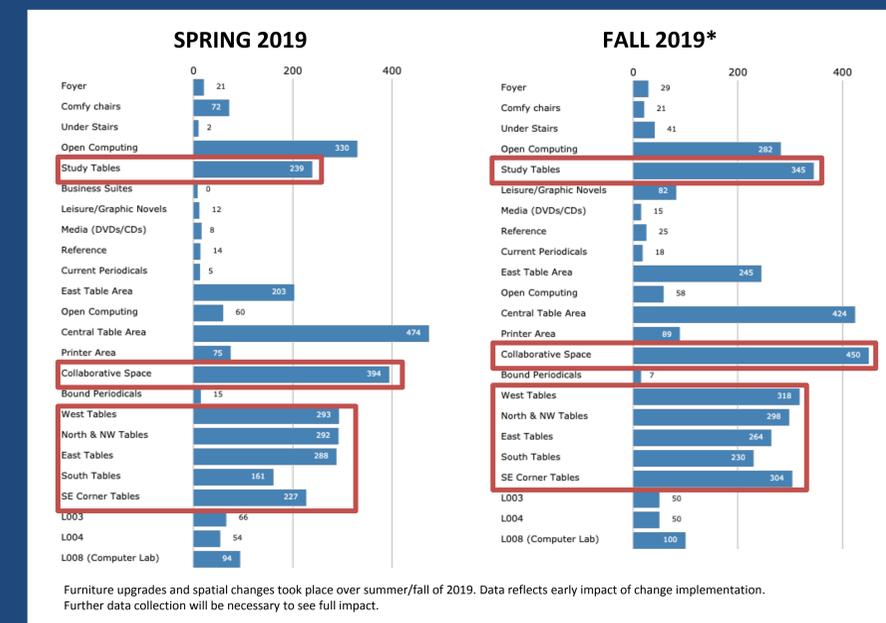
## RESOURCES

- NC State - [lib.ncsu.edu/projects/suma](http://lib.ncsu.edu/projects/suma)
- PALNI - [libguides.palni.edu/analytics/suma](http://libguides.palni.edu/analytics/suma)

## RESULTS

Results from our Suma assessment indicated study tables and collaboration spaces were a priority because of their high usage. We updated tables and chairs in these areas. After the improvements, we saw a nearly **7% increase** in usage of those areas. The collaboration space on the second floor, already a popular area, saw an **8.75% increase** in usage.

Through our computer usage assessment, we determined we could reduce the number of machines and repurpose some of that space on the first floor. We were able to install a virtual reality unit in that area, expanding the type of technology available in the library.



## CONCLUSION

Initial Suma assessment shows the improvements we made lead to increased usage of the building. Fall data results are encouraging, but to get a better assessment of the impact, we will track usage again in the spring to make a more accurate comparison.

