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Statistics-Bierce Library Study

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Senior Honors Project

STATISTICS- BIERCE LIBRARY STUDY

TYLER HUSHOUR

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Bierce Library Study/Senior Stats Honors Project

Introduction: This is a report from two surveys that I created and administered to students and faculty at Bierce library who came to the Circulation Desk or the Tech Desk, as well as some of my other findings when periodically looking around the library to see where students like to study or hang-out. There was a written survey given at the Circulation Desk, and a different survey given at the Tech Check-Out Desk. The project is for Melanie Smith-Farrell, the head of Access Services, and is based on a similar study Ian McCullough did in the science library. While this is the Statistics Honors Project, it is more in the vein of a data management/information management project, as data is gathered that reflects the needs of students and faculty and will be given to library decision makers to get materials to serve students. This means there is unfortunately not much room for me to use my stats chops, instead there was a lot of planning going into the survey (with some shortfalls) and a lot of manipulation to get meaningful information from the surveys, and simple demographic information rather than statistical analysis.

Circulation Desk Survey

110 total surveys returned

99 Students Surveyed (11 Faculty)

Research Questions:

1. What books should we carry behind the desk that students need for classes that we don't already have?

<u>Desired Book</u>	<u>Times Suggested</u>
Accounting	3
ACSM Behavioral Aspects of Physical Activity and Exercise	1
Anatomy	3
Biology	1
Chemistry	2
Cost Management Regression	1
Engineering with Excel	1
English Lit	1
Essential Anthropology	1
Exploring Ethics	1
Genetics	1
human development cross-cultural	1
Marketing and sales	2
Norton Anthology	1
Physics	2
Principles of Finance	1
Prob and Stats	1
Process Analysis	1
Statistics for Scientists and Engineers	1
Theory of Numbers	1
Timber Design	1

This is one of the more difficult tables to extract information on. Some students left the name of the class instead of the name of the book, meaning that more investigation would have to be done as to what the book for the class is.

Suggestion: Perhaps have a webpage on the library site where students can request books to be put on reserve. This data would also be useful to the subject specialist librarians so they can consult with various colleges to find out what books need to be on reserve.

2. What books are often checked out when students need to use them?

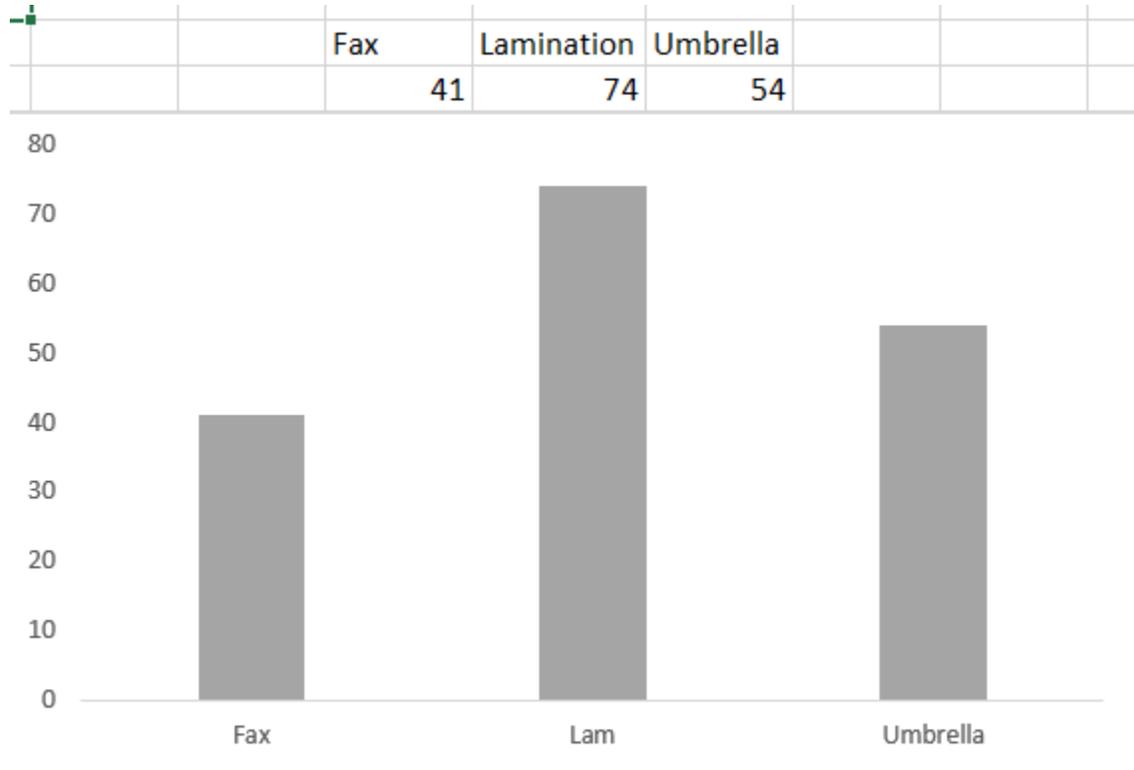
Book often checked out	#Students who said this
Beginning Algebra	3
Black Experience	1
Black History	1
Calc	3
Communication	1
Conversaciones Creadoras	1
Curious Writer	1
Dev Psy	1
Developmental Psych	1
English Comp	1
Fundamental Math	4
Geometry	1
Intro to Communication	1
LSAT	1
Our Social World	1
Precalc	2
Psychology	1
Psychology Human Relation	1
Public Speaking	3
Statistics for the behavioral sciences	1
Tech Math II	1
Think PR	1
Women's Visions	1

Suggestion: A similar webpage where students list what book they find is often checked out would also be beneficial to us.

Limitation: The surveys were administered in October, but the desire for these books depends on time. For example, maybe Thursdays are a busy day for the Calc books because the Homework assignments are due on Friday, or if there is a Public Speaking reading/assignment, the books will be checked out then. Some books are only checked out during a certain time period, such as a book used only at the end of November, and this survey couldn't capture the want for it because of the time period it was given.

3. Would students or faculty like to make use of Fax Service, Lamination Service, or Umbrella Rental? What other suggestions do they have?

Students were asked if they would use a Fax Machine, a Lamination Service, and Umbrella rental, and the support for all three was higher than I expected.



While there is a fax service in the student union, having it in the library could bring business. The Lamination machine could fit right into our arts and crafts room once it opens, and it should be open to the public.

Useful other suggestions:

- One student suggest we work with Amazon books. What a great idea! Amazon offers textbook rental, and we could service their books similar to how we handle OhioLINK.
- 3 asked for microwave access (The Olin Hall Commuter lounge and Arts & Science offer this)
- Student asked for a public paper cutter (would also go great in the arts and crafts room)
- Students want computers on other (quiet) floors. There are so many computers in the Kent library it almost makes one wonder where the tech fee students pay is going at Akron... From walking around the library to see where students study, nearly all of the computers are full during busy weekday times (Between 11 AM and 1 PM, between 4:30 PM and 6:00 PM).
- 2 students asked to see a mail service
- 1 student and 1 faculty member mentioned they would like to have the handicap door remain open that we have downstairs in the curriculum center. The door was intended to only be open temporarily for when we had the giant hole in front of the library, and many supervisors want it

closed, but it only takes a student assistant about two minutes to open it in the morning and to lock it at night.

4. What software would students and faculty like to see on the public computers?

Software Name	#Times Requested
3d printer	2
Adblock	1
Adobe Suite	5
AutoCAD	3
ChemCAD	1
Codeblocks	2
Finale	1
JMP	1
Latex	1
Matlab	4
Microsoft Visual Studio	1
Minitab	2
Photoshop	3
Polymath	1
Protools	1
P-spice	1
R studio	3
SAS	3
Skype	1
Solidworks	4
Spotify	1
Ubuntu	1
Windows 10	1

Much of the requested software is available through the Virtual Labs, but as shown by the requests for software, Virtual Labs is not desirable to use. Many of the requested programs are from the Engineering students [CAD, Matlab], and they would like their hefty programs on our computers (I'll lump SAS in that category even though it's for stats/business stats users). While these are big programs, putting them on an image should be considered as it would increase the number of users. With this increase, however, we won't have an adequate number of computers during busy hours to support the increase. The big programs would also lengthen the Image time for computers when resetting them from scratch. With budget cuts in the winter, there is rumor that we will be cutting Mac support. This means there is no more Photoshop or Adobe Suite, and we will need to fill this void on our Desktops. Whether or not we cut Mac support, a large number of students requested that Adobe and Photoshop be installed on the regular computers. Our laptops do have R and R studio, and as a free and small program, this should be on our desktops without question. Computer science students also don't have access to an IDE to program in, and most classes require students use Codeblocks or Visual Studio to program in, and we currently don't have any way for CS students to do their work.

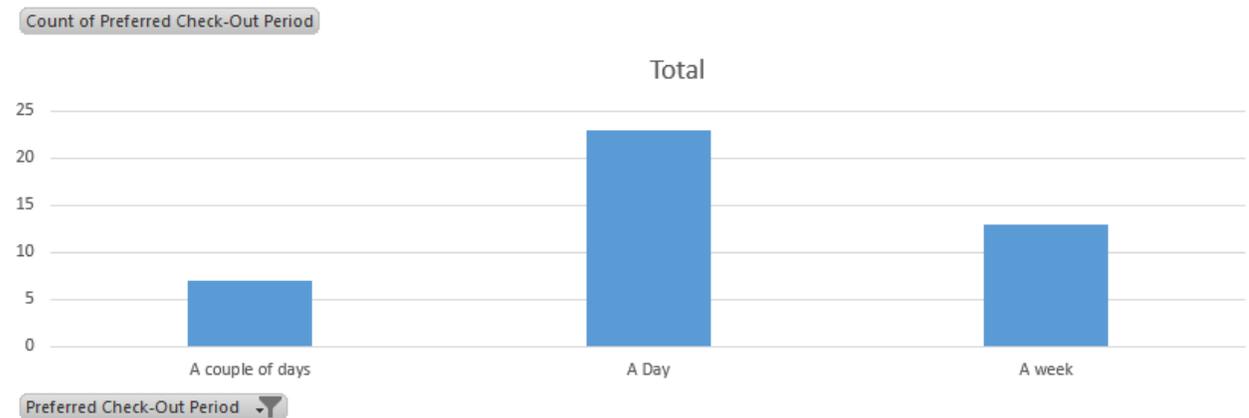
Tech-Desk Survey

Number of Responses= 46

Research Questions:

1. How long do students/staff prefer to check out a laptop for?

Duration	#Times Selected	Sample Proportion	Lower CI Bound	Upper CI Bound
A couple of days	7	16.28%	5.61%	26.95%
A Day	23	53.49%	39.07%	67.90%
A week	13	30.23%	16.96%	43.50%
Grand Total	43			



Unsurprisingly, there is a tie between students who want laptops for multiple days versus just wanting them for one day. This particular survey is very limited, however, due to large margins of error because of such a small sample size, so I included Lower CI and Upper CI bounds. These bounds try to capture an interval where the true percentages lie, and the gap between them (close to 20% for each statistic) is very large, meaning we can't be too confident with our findings. There were also some missing values for this question.

Due Time	#Responses
Due By Midnight	22
Due Following Day	22
Grand Total	44

To add to this, there is a 50-50 split between those who want to turn their laptop in at midnight versus those who want to turn it in the next day and keep it overnight.

Suggestion: We are hoping to extend the check-out period of all laptops to four days, so hopefully this will make students happy who want Laptops for longer than a day.

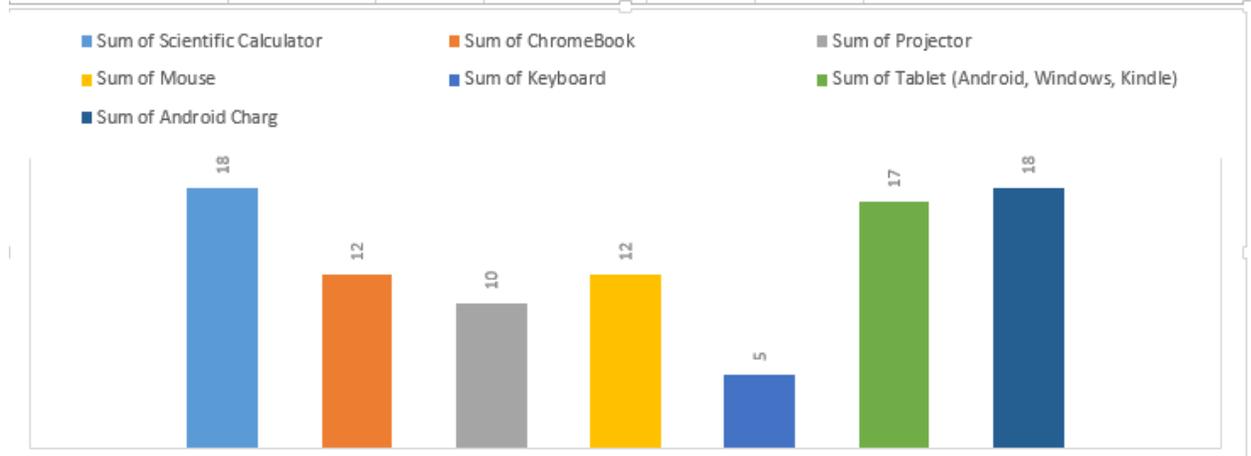
2. What software is requested on the laptops?

Row Labels	Count of stack
Adobe Creative	1
AutoCAD	3
Codeblocks	2
Lockdown	2
Matlab	3
Microstation	1
Photoshop	3
Solidworks	2
Spotify	2
Windows 10	2

These requests are similar to those on the desktop computers from the other survey. There are a number of people requesting Photoshop and Creative Cloud, Computer Science students requesting Codeblocks, and the Engineers with their big programs. The Lockdown Browser would be important to get on all systems: laptops and workstations. There are a number of classes that have tests or quizzes that can only be completed from the Lockdown Browser, but we don't have it on any of our systems.

3. If possible, what new equipment should we order?

Scientific Calculator	ChromeBook	Projector	Android Charg	Mouse	Keyboard	Tablet (Android, Windows, Kindle)
18	12	10	18	12	5	17



The most surprising to me is that 10 people said they would check out projectors from us. While they can get them from downstairs, this would still make our business better. Least surprising is the low number of people who said they would like to check out keyboards, as if they check out a laptop, they won't need a keyboard; but there is a larger group of people who would like to use mice.

Scientific calculators would be a cheap addition to our somewhat limited Graphing Calculator stock.

Many people are upset that we don't have Android Chargers, and as inexpensive as they are, they could make a great addition to our checkouts (there are also a growing number of upset students that can't check out iPhone chargers anymore since we stopped circulating them). Yes, students can buy their own, but if they forget them then we can be their backup, and it also brings new business as they see the library coming in handy for them.

When collecting comments on our laptop service, 25 people said the laptops were extremely slow when logging in; as a result there is a demand for equipment that doesn't have to log in, such as Tablets and Chromebooks. There were a lot of people who specifically requested Windows tablets, but those are simply not in our budget to meet the demand. Perhaps we can consider Kindle or Android options down the road, but they would require a thorough inspection to make sure they are appropriate to check out to students, practical to easily fix and restart, and easy to set up.

While not given as an option for students to check, in the comments section 3 students request that we carry the new Macbook chargers. We have also stopped checking out old Macbook chargers and from experience, people are upset they can't check them out anymore.

4. What items are often checked out? (old)

Because the survey was administered in October, we have since updated our stock. Many people were upset about us not having enough HDMI-VGA adapters, and we have since ordered more (and we are still somewhat low on stock). More HDMI cords could also limit the demand for adapters and should be considered.

From experience, we also need to order more Mac-VGA adapters as we never have any in stock.

Lastly, during the survey, students expressed they couldn't get iPhone chargers when they wanted them, but we've stopped checking them out.

A Couple Odd Findings When Roaming the Library

- There is always a place open that 2 or 3 students can study at any time.
- No one uses the chairs and tables in front of Starbucks.
- There are always students in the couches by the stairs. Maybe we need to find more areas to put couches like that in the front.

Conclusion: While not a perfect survey, it was a good start for the library to start reaching out to hear student and staff needs. Hopefully there can be modules added to our website in the near future where those at the University of Akron can request equipment and books that they need for their classes. This paper can start a discussion between Melanie Smith-Farrell about the findings, as I can explain better in person, and the paper is more of a record of a talk I hope to have.

Circulation Desk Survey

Q1) I am a _____ . (Please check one of the following)

Student(Undergraduate)_____ Student(Graduate)_____
Faculty/Staff Member_____ Guest/Community Borrower_____

If you are a student, please list your major:_____

Q2) Please list any course reserve book (the hourly- check out for classroom books) that we do not carry that you need/have needed for a class:

Q3) Please list any course reserve book that is often checked out when you need it:

Q4) What would you like to see from the library in the future (circle all of your suggestions)?

Fax Service Lamination Umbrella Rental

Areas of Specialization (e.g. Math section, English section, Nursing section)

Other suggestions:

Q5) If you use the public computers on the first floor, please list the software you would like to see added to the computers:

Laptop Desk Survey

Q1) I am a _____ . (Please check one of the following)

Student(Undergraduate)_____ Student(Graduate)_____
Faculty/Staff Member_____ Guest/Community Borrower_____

If you are a student, please list your major:_____

If you are a commuter student, please list your commute time _____

Q2) I prefer to check out laptops for a single day, a couple of days, or for a week: (Please check one)

A day_____ A couple of days_____ A week_____

Q3) How often do you check out a laptop? (Please check one)

Every day_____

Once a Week_____ 2-3 Times Per week_____

A few times a month_____ A few times a semester_____

Q4) What software would you like to see added to the laptops?

Q5) If you have checked out a 1 day laptop, should it be due the following day, or due back by midnight?

Due the following day_____

Due by midnight (closing time)_____

Q6) How often are you able to find an outlet to charge your laptop (inside or outside of the library) (circle one)?

Never On Occasion Most of the time Always

Q7) How do you feel about the performance of the laptops, and what other comments do you have about this service?

Q8) What other items would you like to see us carry in the future (circle all of your suggestions)?

Scientific Calculators

Chromebooks

Android Tablet

Windows Tablet

Projectors

Android Chargers

Kindle

Mouse

Keyboard

Other suggestions:

Q9) What cables/items do you find are often checked out when you need them the most?

Q10) What comments do you have for us to improve our camera service?

