Library Impact on Student Success

Using Library Data to Improve the Student Experience

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University of Minnesota Libraries

ARL Fall Association Meeting
October 4, 2017
Back in 2011...
Are there correlations between library use and student success measures?

And how do you measure success?
Library Data

What are we tracking?
Privacy vs. “personally identifiable information”

http://www.flickr.com/photos/tekmagika/
https://creativecommons.org/licenses/by-nc-nd/2.0
Tracking specific users tied to broad, general use

User X used a Book

User Y used an E-Journal
Digital Data
- Databases
- E-Journals
- E-Books
- Website/Other
- Reserves

Instruction Data
- Workshops
- Course Integrated
- Online Intro to Library Research tutorial

Circulation Data
- Alma
- ILL (both Loans and Articles)

Reference Data
- Online Reference
- Peer Research Consultants

Workstation Data
- Logins
Are there correlations between library use and student success measures?

And how do you measure success?
Grade Point Average

A+ A B B+ B C C+ C D D- D F
Retention
University of Minnesota-Twin Cities

Minneapolis, MN
30,135 undergraduate students
www1.umn.edu

Average Annual Cost

$16,954

Graduation Rate

77%

Salary After Attending

$48,300
We've updated the OIR site, but all content and data sources are the same.

**Student Data**
- Official Enrollment Statistics
- New Freshman Characteristics
- Freshman Graduation / Retention
- More...

**Human Resources Data**
- Employee Headcounts
- Employee and Student Head Counts/ Credit Hours for Fall 2016
- More...

**Tuition & Finance Data**
- President's Operating Budget Plan 2017-18
- Tuition Rates 2017-18
- More...

**Surveys & Assessment**
- Student Experience in the Research University (SERU)
- CIRP Freshman Survey
- Strengths Survey
- More...

**Planning Metrics**
- Progress Card

[oir.umn.edu](http://oir.umn.edu)
<table>
<thead>
<tr>
<th>Demographics</th>
<th>Prior Academics</th>
<th>College Environment</th>
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<tr>
<td>Gender</td>
<td>ACT/SAT Score</td>
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<td>Race/Ethnicity</td>
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<td>First Generation college student</td>
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### Demographic analysis

**Digital: Graduate Student Use**

![Bar chart showing Digital Use by departments]

### Correlative analysis

#### Table 5.

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<td>(Constant)</td>
<td>1.94***</td>
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\[ R^2 = 12.4\% \]

Note. * p < .05, ** p < .01, *** p < .001

Results of a Regression Model Predicting First-Year Students’ Cumulative Grade Point Average
Privacy considerations

• Transparency
• Opt In or Opt Out?
• Institutional Review Board
• Level of collection
  • Personally identifiable information and identifiable materials/services/resources
• Data retention and security
• University policies?
• State laws?
Seat at the Learning Analytics table

http://superfriends.wikia.com/wiki/File:Justice_League_Meeting_Room.jpg

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Groundwork

Research Studies with the Office of Institutional Research
What percent of undergrads will use your library this semester?

The importance of benchmarking
Percent of Undergrad Library Users
Fall 2011

23%

Library Users, 77%
Percent of Undergrad Library Users
Fall 2011 vs. Fall 2016

- **23%** Library Users, 77%
- **12%** Library Users, 88%
2011 First Year Cohort

• For 2011 first year students, use of the library (digital, circulation, workstation, instruction, reference) in first year had a strong, positive correlation to:
  • Grade Point Average
  • Retention to Spring and to second year
  • Indicators of Scholarship (as measured by SERU)
  • Indicators of Academic Engagement (as measured by SERU)
• When controlling for Demographics, Academic Background, and Student Experience variables (and other factors for some studies)
EXTRA! STUDENTS WHO USE LIBRARY HAVE HIGHER RETENTION RATES AND GPA!
In other words, people who used electronic resources were **ALMOST TWICE AS LIKELY** to graduate in four years vs. those who did not.
Library Use and Undergraduate Student Outcomes: New Evidence for Students’ Retention and Academic Success

Krista M. Soria, Jan Fransen, Shane Nackerud

Abstract: Academia libraries, like other university departments, are being asked to demonstrate their value to the institution. This study examines the impact library usage has on the retention and academic success of first-time, first-year undergraduate students at a large, public research university. Usage statistics were gathered at the University of Minnesota during the fall 2011 semester for thirteen library access points. Analysis of the data suggests first-time, first-year undergraduate students who use the library have a higher GPA for their first semester and higher retention from fall to spring than non-library users.

Introduction

As colleges and universities seek to thrive in an era of increased accountability for student success outcomes, many have adopted prioritizing assessment of student success outcomes, largely by prioritizing assessment of academic libraries and services to demonstrate evidence of their effectiveness. Academic libraries are not exempt from this growing trend—recent scholarship has documented the growing interest among academic libraries in articulating their value to campus communities. Acknowledging the effect of increased assessment pressures on academic libraries, Mary Ellen K. Davis and Lisa Janisik Planekliffe noted that "librarians are important; Libraries and the Academy, Vol. 13, No. 2 (2013), pp. 147-164. Copyright © 2013 by The Johns Hopkins University Press, Baltimore, MD 21218.

The Impact of Academic Library Resources on Undergraduates’ Degree Completion

Krista M. Soria, Jan Fransen, and Shane Nackerud

The purpose of this study was to examine the impact of first-year undergraduates (n = 5,368) use of academic library resources in their first year on their degree completion or continued enrollment after four years of study. Propensity score matching techniques were used to control treatment (library users) and control (library nonusers) groups with similar background characteristics and college experiences. The results suggest that using the library at least one time in the first year of enrollment significantly increased the odds that students would graduate in four years or remain enrolled after four years as opposed to withdrawing from the university. First-year students who used electronic resources and books also had significantly improved odds of graduation over withdrawing, while students who used electronic books and took a library instruction course had significantly improved odds of remaining enrolled over withdrawing.

Over the last decade, calls to explore the value of academic libraries in supporting college students' success have yielded several promising research studies that have investigated relationships between students' use of academic libraries, retention, and academic achievement. Given the prioritization of retention and graduation rates among colleges and universities, in addition to mounting public pressures for institutions to encourage students’ success, such library impact research studies continue to have advancing relevance in the field of academic libraries research and assessment and in higher education as a whole. While researchers exploring the associations between academic library use and students' success have used increasingly more robust data sets with large sample sizes, improved their research methodologies and data analyses, and developed progressively nuanced research designs, there remains a series of unanswered questions yet to be addressed. For instance, while graduation rates are important indicators of the success of higher education institutions, there are, at present, few research studies that have explored whether academic libraries and their various components may contribute to students’ long-term success over the course of their enrollment. Stone and

*Krista M. Soria is Analyst, Office of Institutional Research, Jan Fransen is Service Lead, Researcher and Discovery Systems, and Shane Nackerud is Technology Lead, Library Initiatives, all at the University of Minnesota; e-mail: kristasoria@umn.edu, fransens@umn.edu, sna@umn.edu. 2017 Krista M. Soria, Jan Fransen, and Shane Nackerud. Attribution-NonCommercial (http://creativecommons.org/licenses/by-nc/4.0/) CC BY-NC.

doi:10.5960/crl.716.812

812
Is this just a library thing?

Does the rest of the University of Minnesota care?
“[The Libraries] are critical to supporting student success, which is one of our highest priorities at the University. Libraries researchers have gathered compelling data that indicate that undergraduates are more successful (as gauged by higher GPAs, higher retention rates, and higher 4-year graduation rates) when they use our Libraries.”

Provost Karen Hanson
Remarks at the Libraries IMLS National Medal Celebration, July 19, 2017
Students who use our libraries are 40% more likely to graduate in four years.

*A five-year correlational study of 5,368 first-year undergraduate students at the University of Minnesota demonstrated that library use corresponds with a 40 percent increase in the odds of graduation (over withdrawing) in four years. See Z.UMN.EDU/LIBGRADRATE.

Advancing student success

M LIBRARIES
University of Minnesota

*A five-year correlational study of 5,368 first-year undergraduate students at the University of Minnesota demonstrated that library use corresponds with a 40 percent increase in the odds of graduation (over withdrawing) in four years. See Z.UMN.EDU/LIBGRADRATE.
Next up

What interventions work best?
What can we do during the semester?
Is/How is library use predictive of success measures?
Possibilities to explore

Student’s class gets library instruction

Student has no measurable interaction with library during subsequent two weeks

Advisor notified and can reach out

APLUS

Testy McTest Library Activity—Spring 2017

Intro to Library Workshop—1/21/2017
Checked out 2 items—2/5/2017
Viewed 3 e-journals—2/6/2017

Peers Me
Library use this semester
Library Data & Student Success

- A project of the University of Minnesota Libraries, in collaboration with the University of Minnesota Office of Institutional Research
  - Krista Soria (OIR)
  - Shane Nackerud (Libraries)
  - Jan Fransen (Libraries)
  - Kate Peterson (Libraries)
  - Kristen Mastel (Libraries)
- More information about the project on our blog at z.umn.edu/LDSS
- Find a list of our publications at z.umn.edu/LDSSPubs