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# Use of Library Services Can Be Associated with a Positive Effect on First-Year Students' GPA and Retention

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*Evidence Summary*

**Use of Library Services Can Be Associated with a Positive Effect on First-Year Students' GPA and Retention**

**A Review of:**

Soria, K. M., Fransen, J., & Nackerud, S. (2014). Stacks, serials, search engines, and students' success: First-year undergraduate students' library use, academic achievement, and retention. *The Journal of Academic Librarianship*, 40(1), 84-91. <http://dx.doi.org/10.1016/j.acalib.2013.12.002>

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**Abstract**

**Objective** – To investigate the degree of relation between first-year undergraduate students' library use and their academic achievement (measured by cumulative GPA) and first- to second-year retention.

**Design** – Quantitative data obtained from library systems combined with regression analyses.

**Setting** – A large public university located in the United States of America.

**Subjects** – The study included 5,368 non-transfer first-year students, with a total of 5,162 students retained for the final sample.

**Methods** – Data on 10 library usage variables were collected using student logins to library databases and websites and analyzed using SPSS. These variables included logins to databases, use of electronic books and journals, chat reference questions, and workshops signed up for, among others. There were 2 separate regressions utilized to predict students' cumulative GPA by these 10 types of library use. Two separate logistic regressions were utilized to predict first- to second-year retention by the same library usage variables.

**Main Results** – 81.9% of first-year students used at least one library service. Overall, students who used their academic library's services and/or resources once or more during

an academic year had a higher average retention rate and GPA compared to their peers who had not used the library. It was found that four library use areas, including book loans, database logins, electronic journal logins, and library workstation logins, were positively associated with students' GPA. Database logins and library workstation logins were positively associated with retention. Each of the models used to predict either student GPA or retention by library use were found to be statistically significant.

**Conclusions** – The study suggests that there is a positive and significant relationship between a number of library activities and students' GPA and retention. The effect size of these activities upon the primary outcome variables of GPA and retention is small, though this is logical considering the one-time use of a library service is unlikely to meaningfully influence one's academic success. Other non-library factors in the student experience must be considered.

### **Commentary**

Academic libraries are under increasing pressure to demonstrate their contributions to achieving institutional goals and student success. Student success can be conceived in a number of ways. Most germane to this evidence summary, two previous studies tying the library to student success examine the variables of staffing and funding. Emmons and Wilkinson (2011) found that the ratio of professional library staff to students had a positive relationship with retention, while Teske, Cahoy, and DiCarlo (2013) found that different types of expenditures at multiple institutions could be associated with retention and graduation. The study at hand is guided by the following question: Is library use, including the one-time use of specific services, associated with first-year students' GPA and retention when multiple characteristics are controlled for?

Among the work's many strengths, the authors include a number of relevant studies that contextualize the research questions. The population is clearly defined and of a sufficient

size for the research's intent. By controlling for multiple variables the authors reduce the possibility of introducing omitted variable bias, a shortcoming common in research investigating the library's contributions to student success. The many steps of data analysis are described in detail, thus increasing the possibility of replication. Finally, the results and their implications are fully discussed, with numerous recommendations for researchers and practitioners interested in demonstrating the fiscal value of their department.

Some factors in the study negatively impact the strength of the evidence presented. Many of these factors are recognized by the authors in the Limitations and Recommendations section, including the limit that institution size has on generalizability and the fact that some library activities could not be measured because they were not associated with a user ID. One noteworthy factor acknowledged is that of causality, which is that correlation does not imply causation. Likely due to the scope of variables involved, the description of the data collection process lacks sufficient detail to allow for full replication. The assumption made that GPA is equivalent to academic achievement also requires additional consideration.

The study does not include a description of the ethics approval process and whether the authors received IRB approval or notified students that their data was being procured for the purposes of the research. The authors identify their work as one that does not infringe on privacy due to its use of aggregated data, and encourage other libraries to begin collecting data on student use of the library. However, it is not clear what steps were taken to protect patron privacy, a concern not to be quickly dismissed at a time when many companies and organizations are collecting increasingly granular private data without user awareness.

The primary significance of this research lies in its attempt to discern the library's impact upon two variables often identified as key to institutional effectiveness: academic

achievement and retention. Implications of this study include the possibilities of replicating the data analysis process, which can be used to inform the provision of the services measured. Future work in this area, as recommended by the authors, should account for the use of the library as a social and physical space. While it is no doubt challenging to collect these types of data, they will allow library researchers and professionals alike to better represent the myriad functions of the library and depict students as the complex, multifaceted learners that they are.

## References

- Emmons, M., & Wilkinson, F. C. (2011). The academic library impact on student persistence. *College and Research Libraries*, 72(2), 128–149. Retrieved from <http://crl.acrl.org/content/72/2/128>
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