Section Header	Description
CARLI Counts Participant	Tommy Crawford, Reference & Instruction Librarian, Donnelley & Lee Library, Lake Forest College
Project Name/Title	Examining the Effect of Multiple FIYS Library Class Instruction Sessions on Student Success
Single Sentence Abstract	The Donnelley & Lee Library used student data to investigate the connection between increased exposure to library instruction and traditional student success measures, but our methods did not show a strong link.
Motivation(s) for Project	The Donnelley and Lee Library partners with the First Year Studies (FIYS) faculty to provide library instruction to incoming students. In the past, librarians would provide a single session to each class section. Librarians have been pushing to provide 2 sessions when possible, with the belief that more library instruction time will benefit students. The literature indicates that library instruction is correlated with student success measures like retention and GPA (see Suggested Reading section for an overview). Most studies have examined only one-shot sessions, however, and we wanted to see if our "two-shot" model was an improvement. One notable study (Junisbai et al., 2016) did suggest that two "strategically placed" sessions were most beneficial to students. We wanted to see if we could demonstrate that was true at Lake Forest. We hoped that this project would allow our librarians to demonstrate the value of the "two-shot" FIYS model to faculty and administration as well as: • Allow us to better inform and adjust our teaching • Discover if we were having a particular effect on key populations of students (e.g. international, first-generation) • Build opportunities for further library instruction in programs beyond FIYS • Help make a case for the value of the library during a time of leadership transition at the college
Partners and Stakeholders	Partners: • Applied Data Center • Writing Programs • Institutional research • Admissions • Instructional librarians • First Year Studies faculty Stakeholders: • Students • First Year Studies faculty • Library faculty

	• Associate Deans of the Faculty • Center for Academic Success • Writing Programs
Inquiry Question	What is the impact of the number of FIYS library instruction class sessions (0, 1, or 2) on the success of first-year undergraduate students as measured by 1-year retention, GPA, and 1-sesmter completion of the first-year writing credit?
Study Participants/Population	450 first-year students from the Fall 2022 term.

Method(s) of Data Collection and Analysis	Our goal was to be able to model the effect of class session attendance on our dependent variables while controlling for some other factors that might influence student success. We also wanted to be able to break down potential effects by subgroups, particularly international students (n = 72), and first-generation students (n=142).
	
	We chose to use high school wealth as stand-in for the level of research and writing instruction a student was likely to be exposed to before enrolling at the college – which we felt would have a clear impact on our measures of success. Other options we considered included standardized test results, high school GPA, and AP credits. None were perfect, but we felt the wealth score better predicted a student's preparedness for college.
	
	Since one our measures for success related directly to the first-year writing credit, we also controlled for students flagged by the Director of Writing Programs as "of concern" (n=61).
	
	Most of our data was collected from the student information system with help from Institutional Research. High school wealth was collected from Admissions, and writing concern was collected from Writing Programs. The number of class sessions a student was attended was measured by the instruction librarians. We marked the student as having attended a session if they were enrolled in the course. We did not individually take attendance.
	
	The final variables collected included:
	
	Demographic characteristics:
	    female, international, 1st_gen
	Control:
	    writing_concern, wealth_score
	Dependent variables:
	    fy_gpa, college_writing, retained
	Independent variables:
	    any_session, 1_session, 2_sessions

	After the data was collected and entered in a single spreadsheet, faculty associated with the ADC analyzed the data using several statistical methods including ztests and linear and logistic regression models.
Findings	Our findings were inconclusive. We were unable to demonstrate a significant link between library instruction sessions and any of our success measures. The ADC researcher suggested that the small size of the dataset (n=450) was a key reason we could not draw any clear conclusions. Particular issues included: • The limited amount of high school wealth data (none was available for international students, and some was unavailable domestically) • The uneven distribution of class sessions (no sessions: 51, 1 session: 199, 2 sessions: 200) • The very uneven split between retained and unretained students (384 retained, 66 not).
Use of Findings	The findings are being used mostly to help us decide what sort of data will be most useful to collect from future years of FIYS partnership that might help us be able to draw more concrete conclusions.
Next Steps and Other Results	An immediate next step is to liaise further with the ADC faculty to see if there is anything else we can do with the data we have and to solicit their opinions on what data might be most useful to collect going forward. We will also continue to work with our partners and stakeholders from the project to build a relationship that can help the library pursue other assessment opportunities.
Additional Reflections	Please feel welcome to connect with Tommy Crawford at tcrawford@lakeforest.edu.

Timeline		
	Aug. – Nov. 2022	Conducted library class sessions
	Mar. 2023	CARLI counts begins
	May – Jun. 2023	Met with stakeholders
	Aug. 2023	Completed Human Subjects Research Committee review, second CARLI in person meeting
	Sep. – Oct. 2023	Collected data about the previous year's performance. GPA and retention information pulled with help from the Office of Institutional research.
	Nov. 2023	Presented at CARLI annual meeting
	Jan. 2024	Analyzed data with help from the campus Applied Data Center, received results

Suggested Reading	For more discussion of library instruction and its relationship with student success see particularly: Gaha, U., Hinnefeld, S., & Pellegrino, C. (2018). The academic library's Contribution to student success: Library instruction and GPA. *College & Research Libraries*, *79*(6), 737–746. https://doi.org/10.5860/crl.79.6.737 Junisbai, B., Lowe, M. S., & Tagge, N. (2016). A pragmatic and flexible approach to information literacy: Findings from a three-year study of faculty-librarian collaboration. *Journal of Academic Librarianship*, *42*(5), 604–611. https://doi.org/10.1016/j.acalib.2016.07.001 Krieb, D. (2018). Assessing the impact of reference assistance and library instruction on retention and grades using student tracking technology. *Evidence Based Library and Information Practice*, *13*(2), 2–12. https://doi.org/10.18438/eblip29402 Rowe, J., Leuzinger, J., Hargis, C., & Harker, K. (2021). The impact of library instruction on undergraduate student success: A four-year study. *College & Research Libraries*, *82*(1), 7-18. https://doi.org/10.5860/crl.82.1.7 Soria, K., Fransen, J., & Nackerud, S. (2017). The impact of academic library resources on undergraduates' degree completion. *College & Research Libraries*, *78*(6). https://doi.org/10.5860/crl.78.6.812 Wong, S. H. R., & Cmor, D. (2011). Measuring association between library instruction and graduation GPA. *College & Research Libraries*, *72*(5), 464–473. https://doi.org/10.5860/crl-151 Wright, L. B. (2021). Assessing library instruction: A study of the relationship between attendance, retention, and student success. *Journal of Academic Librarianship*, *47*(5), e102431. https://doi.org/10.1016/j.acalib.2021.102431
Appendices	Appendices to come.