

Section Header	Description
Institution Name	Lake Forest College
Institution Characteristics	Private college with FTE enrollment of 1540. FTE library staff is 8.5
CARLI Counts Participant Name + Job Title	Kimberly Hazlett Reference Librarian
Project Name/Title	Impact of Librarian Reference/Research Interactions on First Year Studies Students' Academic Success and Retention.
Single Sentence Abstract	Donnelley and Lee Library investigated the effect of reference librarian interactions on the academic success of First Year Studies students, using data collection and analysis and found that a greater percentage of students who worked with librarians achieved higher GPAs and completed the academic year than those who did not.
Motivation(s) for Project	The goals of student academic success and retention are of great significance to the College. It is also important that we use our library resources wisely in pursuit of these goals. This research is important as a first step in quantifying the impact various library service have on students. Our intent is to use data to help with decision making.
Partners and Stakeholders	<p>Human Subjects Review Committee (HSRC): They made suggestions, presented concerns to be addressed, and approved the research proposal.</p> <p>Associate Dean of Faculty for Student Success: Her ideas and support were critical in multiple ways, including providing the data needed for identifying vulnerable students and helping us pinpoint criteria used to measure student success.</p> <p>Institutional Research Analyst: He analyzed the data and provided feedback.</p> <p>Librarians: The success of this project depended on the support and participation of the Interim Library Director, the Head of Public Services,</p>

	<p>and the other librarians working at the reference desk.</p> <p>Faculty: FIYS instructors who encouraged or required their students to meet with librarians helped increase the number of study participants.</p>
Inquiry Question	What is the impact of reference interactions between librarians and First Year Studies students on the academic success and retention of those students and the sub-group of academically vulnerable FIYS students?
Study Participants/Population	The participants were Lake Forest College students who asked for help with First Year Studies (FIYS) assignments.
Method(s) of Data Collection and Analysis	<p>ID numbers of consenting students (see Appendix C) who asked for help with their FIYS courses, were collected after reference transactions and saved in a password protected spreadsheet. Those ID numbers were given to the College's Institutional Research Analyst at the end of the Fall 2019 semester.</p> <p>Separately, the Associate Dean of Faculty for Student Success used a formula to determine which incoming freshmen students were considered academically vulnerable. She gave those numbers to the Institutional Research Analyst. He then used databases like Jenzabar and Slate to extract information and used Excel to make the calculations.</p>
Findings	<p><b>GPA "2.8 - 4.0"</b> (Appendix A)</p> <ul style="list-style-type: none"> <li>• 79% of all FIYS students who visited the reference desk completed their first semester with at least a 2.8 GPA</li> <li>• 69% of all FIYS students who did not visit the reference desk attained at least a 2.8 GPA their first semester</li> <li>• 53% of Academically Vulnerable FIYS students who visited the reference</li> </ul>

desk completed their first semester with at least a 2.8 GPA

- 54% of Academically Vulnerable FIYS students who did not visit the reference desk attained at least a 2.8 GPA their first semester.

The data for all the FIYS students combined was statistically significant. The sample size for Academically Vulnerable students was too small, but still useful.

**GPA “2.0 and above” or “Below 2.0”**  
(Appendix B)

Since students who fall below a 2.0 GPA are less likely to persist, we looked at the numbers for GPAs above and below 2.0

- 96% of all FIYS students who visited the reference desk completed their first semester with at least a 2.0 GPA
- 91% of all FIYS students who did not visit the reference desk completed their first semester with at least a 2.0 GPA
  
- 86% of Academically Vulnerable FIYS Students who visited the reference desk completed their 1<sup>st</sup> semester with at least a 2.0
- 81% of Academically Vulnerable FIYS Students who did not visit the ref. desk completed their 1<sup>st</sup> semester with at least a 2.0

The results indicate that FIYS students, including the sub-group of Vulnerable FIYS students, who worked with a librarian obtained higher GPAs than those who did not.

	<p><b>Retention (Appendix B)</b></p> <ul style="list-style-type: none"> <li>• 99% of all FIYS students who visited the reference desk completed the spring term.</li> <li>• 93% of all FIYS students who did not visit the reference desk completed spring term</li>   <li>• 100% of Academically Vulnerable FIYS students who visited the reference desk completed spring term</li> <li>• 88% of Academically Vulnerable FIYS students who did not visit the reference desk completed spring term.</li> </ul> <p>The results indicate that FIYS students, including the sub-group of Vulnerable FIYS students, who worked with a librarian had higher retention rates.</p> <p>While this is encouraging, the sample sizes for students identified as Academically Vulnerable were small and more research with more participants needs to be done.</p>
Use of Findings	<p>We will work on promoting individual research appointments with reference librarians, in addition to our regular reference desk hours. This can be done in multiple ways, including signage, highlighting reference/research services during library instruction, and asking faculty to encourage or possibly require students to meet with a librarian, depending on the assignment.</p>
Next Steps and Other Results	<p>We are using what we have learned from this study to initiate a similar, but improved study in Fall 2020. Next time, we will include all consenting freshmen who ask librarians for reference help, instead of only those who</p>

	<p>request help with their First Year Studies course. This should significantly increase the number of participants and give us better data.</p> <p>Update: Due to COVID 19 and remote learning, we paused the study, but plan on continuing in the future.</p>
<p>Additional Reflections</p>	<p>Additional context to help others replicate the study:  This study involved significant input from the Associate Dean of Faculty for Student Success both in terms of vulnerability data and guidance towards making the research relevant beyond the library.</p> <p>Challenges:  Once we were granted permission by the HSRC to conduct the research, the remaining challenge was for the librarians to remember to ask students what course they were getting help with. It is likely that some students were not asked and therefore their IDs were not recorded.</p> <p>Resources/budget needed:  This research project did not require any purchases and was not labor intensive.</p>
<p>Timeline</p>	<p><b>February 2019</b> – First CARLI Counts meeting. Considered several research ideas; discussed with colleagues and settled on initial plan to research all course-related reference transactions and the associated students within each course.</p> <p><b>Early March 2019</b> – Submitted Human Subjects Review Application and met with Institutional Research Analyst.</p>

	<p><b>Late March 2019</b> – Heard back from the Human Subjects Review Committee (HSRC) with a number of concerns to address.</p> <p><b>April 5 2019</b> – Met with Chair of the HSRC to discuss roadblocks and collaborate on an informed consent form.</p> <p><b>April 11, 2019</b> – Met with Associate Dean for Student Success and adjusted research plan using her ideas to research students in First Year Studies courses.</p> <p><b>May 2019</b> – Received permission from the HSRC to proceed with the research.</p> <p><b>August 2019 – December 2019</b> collected data</p> <p><b>January 2020</b> – Submitted data to Institutional Research Analyst.</p> <p><b>December 2020</b> – Institutional Research Analyst provided data on which students persisted and returned for their sophomore year.</p>
Bibliography/Works Cited	NA
Appendices	Please see appendices below

Appendix A: Data Tables with GPA Breakdown

FIYS combined courses	386 (FIYS total)	75 (visited reference desk)	311 (did not visit)
Fall 2019 GPA 2.8-4.0	71% (273)	79% (59)	69% (214)
Fall 2019 GPA 2.0-2.79	21% (82)	17% (13)	22% (69)
Fall 2019 GPA Under 2.0	8% (31)	4% (3)	9% (28)

Vulnerable students	84 (total)	15 (visited the reference desk)	69 (did not visit)
Fall 2019 GPA 2.8-4.0	54% (45)	53% (8)	54% (37)
Fall 2019 GPA 2.0-2.79	28% (24)	33% (5)	27% (19)
Fall 2019 GPA Under 2.0	18% (15)	14% (2)	19% (13)

Non-vulnerable students	302 (total)	60 (visited the reference desk)	242 (did not visit)
Fall 2019 GPA 2.8-4.0	76% (228)	85% (51)	73% (177)
Fall 2019 GPA 2.0-2.79	19% (58)	13% (8)	21% (50)
Fall 2019 GPA Under 2.0	5% (16)	2% (1)	6% (15)

Appendix B:

Data Tables for “2.0 and Above” and “Below 2.0” and Spring Term Completion

FIYS combined courses (total)	386 (FIYS total)	75 (visited reference desk)	311 (did not visit)
Vulnerable students (%)	22% (84)	20% (15)	22% (69)
Non-vulnerable students (%)	78% (302)	80% (60)	78% (242)

FIYS Combined Courses	386 (FIYS total)	75 (visited reference desk)	311 (did not visit)
Fall 2019 GPA 2.0 – 4.0	92% (355)	96% (72)	91% (283)
Fall 2019 GPA Under 2.0	8% (31)	4% (3)	9% (28)
Completed Spring Term	94% (362)	99% (74)	93% (288)

Vulnerable Students	84 (total)	15 (visited the reference desk)	69 (did not visit)
Fall 2019 GPA 2.0 – 4.0	82% (69)	86% (13)	81% (56)
Fall 2019 GPA Under 2.0	18% (15)	14% (2)	19% (13)
Completed Spring Term	90% (76)	100% (15)	88% (61)

Non-vulnerable Students	302 (total)	60 (visited the reference desk)	242 (did not Visit)
Fall 2019 GPA 2.0 – 4.0	95% (286)	98% (59)	94% (227)
Fall 2019 GPA Under 2.0	5% (16)	2% (1)	6% (15)
Completed Spring Term	95% (286)	98% (59)	94% (227)



## Appendix C: Informed Consent Form

We are conducting a research study to see if working with reference librarians on First Year Studies (FIYS) assignments has a positive effect on students' academic success.

The study will report on students as a group, not as individuals, and no personally identifiable information will ever be shared.

Your participation is completely voluntary. There are no anticipated risks associated with this study. If you agree to participate, you will provide your Student ID number. These numbers will be kept in a password protected file.

At the end of the semester, ID numbers will be shared with Lake Forest College's Institutional Research Analyst. He will use that information to create collective information (i.e. aggregate data) about GPAs, course completion, the number of credits earned in the Fall 2019 semester, and retention.

All ID numbers will be deleted after the Institutional Research Analyst extracts the data.

If you have any questions about this study or are interested in the results, please contact Kim Hazlett at (847)735-5063 or hazlett@lakeforest.edu.

If you have any questions regarding your rights as a research subject, please contact Kathryn Dohrmann, Chair of the Human Subjects Review Committee, at (847) 735-5245 or dohrmann@lakeforest.edu.