The impact of information literacy instruction on student success:
A multi-institution study
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Background

• Origins of the project
• Objectives
• Motivation
• Participation
47,012 first-year students
25,327 had library instruction
Scope of Project

• Largest study of its kind to date
• Diverse institutions across the west
• Diverse student population
• Includes all students instead of looking at only students who had library instruction
• Longitudinal
Project Design

• GWLA Student Learning Outcomes Task Force developed research questions which guided design

• Research Methods Design Committee refined questions
  • What effect does library instruction have on the retention of college students?
  • What effect does library instruction have on the academic success of college students?
  • What is the impact of specific library instruction methods on the retention and academic success of college students?
Challenges and Complexity

• Data collection process at each institution
• Data acquisition process
  • Data cleaning and coding
  • Merging datasets
• Data sharing agreement
• Planning first year data vs. longitudinal data
• IRB approval at each institution
  • Security
    • De-identifying data
    • Data storage
Instruction/Course Level Variables

- Pedagogy
  - Active Learning
  - Directed Practice
  - Flipped Instruction
  - Lecture
  - Other
- Session level
  - Co-designed Assignment
  - Library Tour
  - Time/Frequency Library Instruction
  - Online Tutorial or Digital Learning Object
  - Research Guide Used

Registrar/Student Level Variables

- Grades
- Credit Hours Earned
- Retention
  - Semester
  - Year
  - Graduation
- Demographics
  - Gender
  - Ethnicity
  - ESL
  - Admissions Data
Summary of Results from 2014-15

Key findings include:

- Student retention rates are higher for those students whose courses include an information literacy instruction component.
- On average, First-Year GPA for students whose courses included information literacy instruction was higher than the GPA of students whose courses did not.
- Students exposed to library instruction interactions successfully completed 1.8 more credit hours per year than their counterparts who did not participate in courses containing information literacy instruction.

What effect does library instruction have on the retention of college students?

- A Fisher’s Exact Test => in 8 of the 12 schools attendance in library instruction is highly associated with student retention.

- Spearman correlation coefficients => positive correlations for all 8 schools with significant results. That is, those attending library instruction tended to have a higher retention rate in these 8 schools.
What effect does specific library instruction methods have on the retention of college students?

<table>
<thead>
<tr>
<th>Teaching Method</th>
<th>Number of Schools Testing Significant Based on Fisher’s Exact Test and Direction of Association</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Using Method</td>
</tr>
<tr>
<td>Active Learning</td>
<td>12</td>
</tr>
<tr>
<td>Directed Practice</td>
<td>12</td>
</tr>
<tr>
<td>Flipped Instruction</td>
<td>10</td>
</tr>
<tr>
<td>Lecture</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
</tbody>
</table>

(*) The negative column does not represent a single school
What effect does specific library instruction methods have on the retention of college students?

<table>
<thead>
<tr>
<th>Session Characteristic</th>
<th>Using Method</th>
<th>Significant Result</th>
<th>Positive Effect</th>
<th>Negative Effect</th>
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</thead>
<tbody>
<tr>
<td>Co-Designed Assignment</td>
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<tr>
<td>Library Tour</td>
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<td>2</td>
</tr>
<tr>
<td>One-time Library Instruction</td>
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<tr>
<td>Online Tutorial or Digital Learning Object</td>
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<tr>
<td>Research Guide Used</td>
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<td>6</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>
What effect does library instruction have on the academic success of college students?

- Academic success: *First Year GPA* and *First-Year Hours Earned*

- These two variables are significantly and positively correlated across all schools.

- Comparing the group who attended library instruction with the group that did not for each of the two success measures shows that in both cases there are statistically significant differences in the parameter means (P<<0.05).

- *First-Year GPA* for students who attended library instruction was 0.02 points higher than students who did not (p=0.009).

- These students can be expected to complete 1.8 more credit hours than those who did not attend the instruction (p = 7.69E-102).
What effect does library instruction have on the academic success of college students?

- These tests were repeated for each individual school.

- Mean First-Year GPA was significantly different for those who attended library instruction compared to those who had not attended in eight (8) of the twelve (12) schools:
  - five (5) in which the mean of the attendees was greater than non-attendees
  - three (3) in which the mean of the attendees was less than non-attendees

- Mean First-Year Earned Hours was significantly different for those who attended library instruction compared to those who had not attended in eleven (11) schools:
  - ten (10) being greater number of hours for those who attended
  - one (1) being less
### Institutional Implications
- Library instruction has a positive impact on student academic success and speaks to the institution’s mission and goals
- Information literacy program improvements
- Accreditation
- Collaborations

### Professional Implications
- Evidence based instruction program improvements
- Contributing to institutional value statements (accreditation)
- Model for research reproduction
Study Future Directions

- Continue data collection and follow year one students for five years
- Mid-point analysis and five year analysis
- Extend study for five more years
- Continue to add new institutions
- Disseminate results to inform practice

Professional Future Directions

- Evidence based research for programmatic planning
- Accreditation bodies are including information literacy evidence in their standards
- Model for reproduction of multi-institutional research
- Potential for public national dataset


