Closing the Loop with HEDS: Information Literacy Program Assessment

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Closing the Loop with HEDS: Information Literacy Program Assessment

Abstract
The presentation discusses the Research Practices Survey tool from the Higher Education Data Sharing consortium (HEDS). St. John Fisher College, Lavery Library has worked with the survey on and off since 2008. Librarians using HEDS data to close the loop and modify teaching practices have increased scores by up to 60%. Currently, Lavery Library is using the Research Practices Survey in a longitudinal administration to determine persistence of information literacy skills and pinpoint areas of further instruction and/or assessment.

Keywords
fsc2016

Disciplines
Educational Assessment, Evaluation, and Research | Information Literacy | Library and Information Science

Comments
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Closing the Loop with HEDS

Information Literacy Program Assessment

ANNY April 19, 2016
HEDS=Higher Education Data Sharing Consortium

http://www.hedsconsortium.org/

- “The Higher Education Data Sharing Consortium (HEDS) supports institutional research, institutional effectiveness, assessment, and the use of data to advance liberal education at private colleges and universities.”

- Although only private institutions may be members, there are no restrictions on survey participation by institution type.

- HEDS members pay a reduced fee to administer surveys.
HEDS Surveys

- HEDS Alumni Survey
- HEDS First Destination Survey
- HEDS Research Practices Survey
- HEDS Senior Survey
- HEDS Sexual Assault Campus Climate Survey
- HEDS Teaching Quality Survey
The HEDS RPS:

- Asks students about their research experiences
- Assesses students’ Information Literacy skills
- Includes questions mapped to the Association of College and Research Libraries’ 5 IL competency standards*
- Takes about 15 minutes to complete
- Is open to non HEDS members
ACRL Information Literacy Standards

Adopted in 2000, endorsed by MSCHE

1. Determine the extent of information needed
2. Access the needed information effectively and efficiently
3. Evaluate information and its sources critically
4. Incorporate selected information into one’s knowledge base
5. Use information effectively to accomplish a specific purpose
6. Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally
Survey Information

- 2 types of administration, single or longitudinal
  - Single-beginning or end of the First Year
  - Longitudinal
    - First Year
    - First Semester
    - Four year

- Survey comparison group includes results from all cohorts from the last three years

- HEDS provides detailed reports
HEDS and SJFC

- St. John Fisher College-3659 FTE, 75% undergraduate, 25% graduate students
  - 2008 and 2010 single administration at the end of the First Year
  - 2016 4 year longitudinal and single for the Class of 2016
  - 2016 SJFC response rate 33% with Amazon gift card incentives
### Closing the Loop 2008-2010

**Using Boolean logic**

<table>
<thead>
<tr>
<th>HEDS Survey Q.17 - Search that would retrieve the most results:</th>
<th>2008</th>
<th>2010</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJFC</td>
<td>SJFC</td>
<td>Other*</td>
<td>SJFC</td>
</tr>
<tr>
<td>Movies OR Films</td>
<td>20.5%</td>
<td>28.6%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Movies AND Films</td>
<td>41.6%</td>
<td>45.9%</td>
<td>51.3%</td>
</tr>
<tr>
<td>Movies NOT Films</td>
<td>8.4%</td>
<td>3.1%</td>
<td>2%</td>
</tr>
<tr>
<td>Movies INSTEAD OF Films</td>
<td>4.7%</td>
<td>3.2%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>24.7%</td>
<td>19.3%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Correct answer = Movies OR Films**

Analysis and Change: Librarians recognized that Fisher students fell 8% points behind other HEDS institutions in using Boolean logic. Instruction focused on this skill, using a concept map to help students organize their thinking around synonyms and using AND and OR in a search statement. There was considerable improvement; however, the results continued to be unsatisfactory.
### Using Boolean Logic

<table>
<thead>
<tr>
<th>Lavery/Qualtrics question: How would you search for an article containing ALL of the following terms?</th>
<th>2013</th>
<th>2014</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJFC</td>
<td>SJFC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teenagers AND pregnancy OR poverty</td>
<td>6%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Teenagers AND pregnancy AND poverty</td>
<td><strong>84%</strong></td>
<td><strong>88%</strong></td>
<td><strong>4%</strong></td>
</tr>
<tr>
<td>Teenagers OR pregnancy OR poverty</td>
<td>8%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Teenagers OR pregnancy AND poverty</td>
<td>2%</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

**Correct answer = teenagers AND pregnancy AND poverty**

Analysis and Change: Lavery Librarians continued to adjust instruction in 2011, 2012, and 2013 to bolster student learning. Librarians added a human Boolean exercise to reinforce this information literacy skill, and gave more time for student hands-on practice using Boolean in databases. Librarians are satisfied with the resulting year-on-year incremental improvement in the use of AND in Boolean logic, and will continue their current teaching practices.
**Truncation question 2013-14**

<table>
<thead>
<tr>
<th>Using Truncation</th>
<th>2013</th>
<th>2014</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lavery/Qualtrics question: How would you best truncate the word XXXXX to find the largest number of results?</td>
<td>SJFC</td>
<td>SJFC</td>
<td></td>
</tr>
<tr>
<td>Computerize*/teenager*</td>
<td>9%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Computer*/teenage*</td>
<td>26%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Compute*/ teens*</td>
<td>25%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Comput*/teen*</td>
<td>40%</td>
<td>82%</td>
<td>42%</td>
</tr>
</tbody>
</table>

**Correct answer = comput* (2013), teen* (2014)**

**Analysis and Change:** After the 2013 evaluation of truncation strategies, librarians committed to do a better job of teaching this concept. Librarians added an exercise to show an example of good vs. bad truncation, and have students brainstorm all words they could think of that might be found using the truncated term “comp*.” The evaluation shows vast improvement in student learning. Librarians will continue using these teaching strategies.
SJFC & HEDS 2016-

- Fall 2016 starts longitudinal study
  - First Year Students, Class of 2019
    - Pre-test September 2015
    - Post-test April 2016
  - Graduating Seniors, Class of 2016
    - Post-test April 2016
  - Continuing annually until at least 2019
Average percentage of correct responses to research terms and strategies questions

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. John Fisher College</td>
<td>60%</td>
</tr>
<tr>
<td>All FY Students</td>
<td>61%</td>
</tr>
<tr>
<td>FY Students at Top 25% Institutions</td>
<td>68%</td>
</tr>
</tbody>
</table>
## Comparison by Question Type

### Students' Skill Using Research Terms and Strategies

<table>
<thead>
<tr>
<th></th>
<th>SJFC FY Students versus All FY Students</th>
<th>SJFC FY Students versus Top 25%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>≈</td>
<td>⬇⬇</td>
<td>⬆⬆⬆ Large positive difference</td>
</tr>
<tr>
<td>Finding Sources</td>
<td>≈</td>
<td>⬇</td>
<td>⬆⬆ Moderate positive difference</td>
</tr>
<tr>
<td>Evaluating Research and</td>
<td>≈</td>
<td></td>
<td>⬆ Small positive difference</td>
</tr>
<tr>
<td>Sources</td>
<td></td>
<td>≈</td>
<td>≈ No difference</td>
</tr>
<tr>
<td>Citing Sources</td>
<td>⬇</td>
<td>⬇⬇</td>
<td>⬆⬇ Small negative difference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>⬇⬇</td>
<td>⬆⬇⬇ Medium negative difference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>⬇⬇</td>
<td>⬆⬇⬇⬇ Large negative difference</td>
</tr>
</tbody>
</table>
# Confidence Level

<table>
<thead>
<tr>
<th>Overconfident Students</th>
<th>St. John Fisher College</th>
<th>All FY Students</th>
<th>Top 25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students who thought that research skills were easy but used them poorly</td>
<td>42%</td>
<td>27%</td>
<td>14%</td>
</tr>
</tbody>
</table>
Next Steps

☐ Summer 2016
  ■ Analysis of pre and post-test data
  ■ Work with IR to add demographic and Banner data
    ☐ Add the following criteria
      ■ GPA
      ■ Major
      ■ Transfer

☐ Set goals, including SJFC in the top 25%
Questions HEDS RPS may help answer

- Is there a difference in transfer students’ results?
- Do IL skills persist to graduation?
- Is there a difference in IL skills among majors/schools?
- Are Fisher graduates information literate?
Your Questions?

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