2016

Getting More From LibQual+ Data: Using Open Source Tools for Data Analysis and Visualization

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Recommended Citation
Miller, Julie; Gaede, Franny; Welp, Andrew; and Menard, Laura, "Getting More From LibQual+ Data: Using Open Source Tools for Data Analysis and Visualization" (2016). Scholarship and Professional Work. 66.
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1. **Cleaning up the data**

   - **Team members:** Andrew Welp (role: Statistical analyst and number cruncher), Laura Menard (role: Visualization wrangler and designer)
   - **Tools:** Excel, SPSS, SAS

   The first step in this process was cleaning up the raw data provided to us by LibQual+. The raw data were provided to library personnel in .txt format and were manually cleaned up in order to provide clarity for analysis. The raw data were necessarily coded alphanumerically in order for collection of the data. These codes were manually replaced with their actual labels for human analysis.

2. **Asking research questions**

   - **Team members:** Julie Miller (Andrew Welp role: Dean of Libraries and big picture thinker)

   1. Are there significant differences in responses based on the preferred library (Irwin Library and the Ruth Lilly Science Library)?
   2. Are there significant differences in responses based on demographics? Demographic characteristics included:
      - sex
      - age
      - user group (e.g., undergraduate, student, graduate student, faculty)
      - discipline

3. **Selecting & Applying Statistical Tools**

   - **Team member:** Laura Menard (Andrew Welp role: Visualization wrangler and designer)
   - **Tools:** Excel, SPSS, SAS

   A trial of SPSS and the University Edition of SAS were used to conduct inferential analysis of the data for no cost.

4. **Plan & Implement Visualization**

   - **Team members:** Franny Gaede (role: Visualization wrangler and designer)

   We looked at several options, and after weighing some costs and benefits, selected two high-quality and cost-effective visualization applications:
   - Tableau
   - Keynote

   Tableau is free, relatively easy to learn, and allows users to harness the platform for everything from basic to advanced visual analytics. Keynote was then used to turn our Tableau visualizations into an infographic.

5. **Integration into Strategic Planning**

   - **Team members:** All

   The faculty and staff of Butler University Libraries meet annually to review progress toward goals based on assessment reports and to identify new or continuing initiatives in support of the five strategic priorities and seven goals of the 2013-16 strategic plan.

   In our planning retreat in August 2015, we reviewed both quantitative and qualitative LibQual+ results to inform the planning discussion. Five of the resulting 26 initiatives developed for the 2015-16 academic year were based on LibQual+ findings and response themes.

6. **Closing the loop & next steps**

   - **Team members:** All

   Here are two strategic initiatives developed using LibQual+ data, the actions taken as of August 2016, and results/next steps:

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Action(s) Taken</th>
<th>Results/Next Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved access to primary constituent electronic resources</td>
<td>Embrace to Drupal and redesigned website for easier navigation</td>
<td>Increased usage of library electronic resources</td>
</tr>
<tr>
<td>Improved access to primary constituent print materials</td>
<td>Enhanced findability and improved visibility of print materials</td>
<td>Increased print material usage</td>
</tr>
</tbody>
</table>

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