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HELIN Data Analytics Task Force Final Report

HELIN Consortium. Data Analytics Task Force

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HELIN DATA ANALYTICS TASK FORCE

FINAL REPORT

JUNE 30, 2015

Co-Chairs:
Laruen Slingluff, Wheaton College
David Meincke, Johnson & Wales University
Julie Kliever, Providence College

Report Contributors*:*
Melanie Soter, Community College of Rhode Island
Judith Stokes, Rhode Island College
John Schlinke, Roger Williams University
John Lewis, Salve Regina University
Ruth Souto, HELIN Central Office

HELIN Data Analytics Task Force Charge

In November of 2014, HELIN Executive Director Bob Aspri sent a request to all HELIN Library Directors asking each of them to appoint a Data Analytics Task Force representative:

> The HELIN Board has asked me to put together a Data Analytics Task Force, and each of you have been recommended to serve on the Task Force by your Library Dean/Director. The Task Force's "Charges" are the following:
>
> 1. *Perform an environmental scan of HELIN systems and services identifying key questions and data sources that could inform the consortium on systems and services usage patterns, permitting a data driven understanding of user needs.*
>
> 2. *Identify one or more data visualization tools to create personalized, interactive data visualizations, reports and dashboards from multiple data sources, permitting a visualized data driven understanding of user needs.*
>
> 3. *A final summary report will be available to the Executive Director by June 15, 2015.*

Task Force Members

From this request, the following members were appointed to the Task Force:

CCRI: Melanie Soter
Johnson & Wales University: David Meincke
Providence College: Julie Kliever
Rhode Island College: Judith Stokes
Roger Williams University: John Schlinke
Salve Regina University: John Lewis
Wheaton College: Lauren Slingluff
HELIN Central Office: Martha Sanders and Ruth Souto

Summary of Findings

The main task undertaken by the HELIN Data Analytics Task Force was to conduct a proof-of-concept usability test of HELIN OneSearch, which is the Consortium's brand name for the Encore Duet discovery service. After the initial meeting in November 2014, the Task Force met 6 times in 2015 to plan and execute a prototype test. Staff members from EBSCO Information Services' User Research group acted as usability test advisers and coordinators and attended all meetings, either onsite or via WebEx. Task Force members collaborated to come up with specific scenarios and personas which would best emphasize patron likes, dislikes and general understanding of OneSearch. Using a small sample of volunteer student test subjects from 3 different HELIN institutions, testing took place in mid-April. The results were analyzed by EBSCO and presented at the final meeting of the Task Force on April 28. Based on this limited testing, general findings were as follows:

- Students who don't receive prior information instruction are generally not aware of OneSearch.
- Students who do know about OneSearch do not necessarily understand the difference between OneSearch and the HELIN Catalog.
- Most students still continue to do their research by searching database lists, LibGuides, the Journal A to Z list, and the HELIN catalog (although not necessarily in that order).
- When features and operation of OneSearch are explained to students, they recognize its usefulness (especially facets, which many referred to as "filters").
- Lack of clarity on how to get directly to full text items causes frustration.

A larger and more comprehensive usability test would be needed to draw out more specific conclusions.

Secondary tasks undertaken by the Task Force included trials and reviews of 5 data analysis tools, as well as a review of EBSCO User Research, which is quantitative data on the use of OneSearch available directly from EBSCO.

The remainder of this document is a detailed account of the proceedings of the HELIN Data Analytics Task Force.

Task Force Initial Meeting

The initial meeting of the Task Force took place on November 21, 2014 at Johnson and Wales University. Lauren Slingluff (Wheaton College) and David Meincke (Johnson & Wales University) were elected as Co-Chairs. Since Lauren was scheduled to go out on maternity leave during the time the final report was to be written, Julie Kliever (Providence College) was appointed as Alternate Co-Chair.

During the initial meeting, plans for executing the tasks outlined in the HELIN Board of Director's charge were discussed.

Task Force Deliverable #1: Encore Duet Usability Testing

To address the need for Library Directors to make data-driven decisions, Bob Aspri proposed that the group conduct a usability test of Encore Duet. Prior to this initial meeting, Bob had been in touch with EBSCO Information Services in regards to having them oversee the test plan. Bob suggested that EBSCO's VP for User Research, Kate Lawrence, attend the next Task Force meeting to come up with a test plan roadmap. The group agreed that while we might not be able to perform extensive testing by the end of the Task Force charter period, a small-scale usability test would be a good proof-of-concept for potential future testing.

Task Force Deliverable #2: Reviews of Data Analysis Tools

The group discussed a secondary task, which would be to choose specific data analysis and visualization tools and then write short reviews of their findings. These were labeled "mini reviews". Task Force members offered suggestions of potential tools and packages to be reviewed. The proposed list of suitable tools, and the person assigned, was finalized as follows:

Tableau – Julie Kliever

Google Analytics – David Meincke and Lauren Slingluff

EBSCO data and statistics- John Schlinke along with RWU colleague Sue McMullen

Sierra data and statistics and Sustainable Collections Services GreenGlass - Judith Stokes

Web Management data and stats- Ruth Souto

The "mini-reviews" can be found at the end of this Report.

Task Force Deliverable #3: EBSCO User Research/EDS Usage Report

During one of the early Task Force meetings, Kate Lawrence (EBSCO VP of User Research) and Khalilah Gambrell (EBSCO User Research Consultant) informed the Task Force about quantitative data they could provide on HELIN patrons' use of OneSearch. These reports were different than those that could be generated by HELIN members using EBSCOAdmin. A sample report containing usage statistics for each school was delivered in late March. Information contained in these reports includes user session statistics, publication types, publication titles, and top search terms. Khalilah and Kate explained that report data is collected at the point when a OneSearch user accesses the EDS interface, not from the Encore interface. Task Force Members have been instructed to contact Amy Thurlow (EBSCO Senior Account Executive) whenever a new report is desired. (Reports can be also be regularly scheduled). The sample report which was delivered to the Task Force in March 2015 is here:

HELIN EDS Usage Data Analysis Report

Additionally, Khalilah Gambrell offered a document showing differences between EBSCO User Research reports and reports that Task Force members could generate using EBSCO Admin:

EBSCO User Research (EUR) vs. EBSCOAdmin Reporting

OneSearch Usability Testing

1st Task Force Meeting: Jan 7 2015 @ Providence College

Introduction to Usability Testing with EBSCO User Research staff

Attending along with Task Force appointees were Kate Lawrence (EBSCO VP for User Research) and Khalilah Gambrell (EBSCO User Research Consultant), who had been assigned to coordinate and oversee OneSearch usability testing. Most of the meeting was spent discussing previous student usability test plans conducted by EBSCO, as well as general student research behavior.

2nd Task Force Meeting: Feb 3 2015 @ JWU

Planning for OneSearch Usability Testing

This meeting's primary focus was to lay out specifics for HELIN's OneSearch Usability Test Plan. Khalilah Gambrell (EBSCO User Research Consultant) shared a Pretest Planning Guide which outlined the specific information that would be needed before testing could begin:

- Data Analysis gathering: Decide which actions or items (qualitative or quantitative) we want to test.
- Write "personas" to identify targeted test groups: "Personas" are fictional characters created to represent the different user types – for example, "distance learner", "community college student", "advanced researcher", etc.
- User testing requirements: Decide on whether testing would in-person, remote, or both.
- Literature Review: In the Pretest Planning Guide, Khalilah provided citations and excerpts of articles about student usability testing as well as examples of personas written by other

institutions.

Task Force members agreed to think generally about personas and come up with sample test scenarios for the next meeting.

3rd Task Force Meeting: Feb 23 2015 @ JWU
Planning for OneSearch Usability Testing , continued

Via a WebEx with Khalilah Gambrell (EBSCO User Research Consultant), the group continued to discuss which persona characteristics would best suit the prototype usability test. Each attendee picked a specific persona to construct, to be presented at the next Task Force meeting. The group also worked to establish a timeline for the testing process by working backward from the end of the Spring semester, with everyone agreeing that test subjects would not be available any later than April 30.

4th Task Force Meeting: March 11 2015 @ RIC
Discussion with EBSCO to select specific test criteria

Beth Sauer (EBSCO User Research Coordinator) and Kate Lawrence (EBSCO VP of User Research) were in attendance. Task Force Members discussed the personas that had been written since the previous meeting, The personas were considered against Dana Chisnell's persona modeler – grouping users by attitude, aptitude and ability. From this discussion, a list of potential personas were chosen:

- **The Online Learner/Continuing Education Student**
  May be part-time, efficiency-seeker, highly motivated. Typically conducting research in isolation (alone from home, etc.), so access to help from peers and librarians is limited.

- **Faculty Member**
  We called this group the "non-librarian skilled informavores" - translation: they have high aptitude but also increased potential for frustration, which will impact their attitude. These are users with demands and expectations. Confident searchers, they know what they want but not necessarily how to get it.

- **College Senior**
  These students are "locked & loaded", ready to graduate. They have their blinders on — they're not looking to find new ways to conduct research; what they know already has worked for them. "I'm all set with that" mindset. "Big fish in a small pond".

- **Transitional Undergraduate Student**
  Perhaps called the “Influenceable Undergraduate Student”, as a way of differentiating him/her from the College Senior persona. This student is willing to pay attention and learn new ways of conducting research. Has a more positive attitude than the college senior, but likely a lower ability set. Motivated to seek help from librarian or peers because it’s still ‘early in the game’ and there’s no shame attached to not knowing something.

- **Community College Student**
  This is the “I don’t know where to even begin” student. These community college students have much more resiliency to overcoming obstacles, which makes their attitude score higher than traditional undergrads. They welcome expert help and they are willing to seek out librarians for assistance. They tend to be more grateful for help as well.

Beth Sauer (EBSCO User Research Coordinator) and Kate Lawrence (EBSCO VP of User Research) guided the group through test methodology. They suggested 2-3 test subjects in each persona group. Four institutions volunteered to recruit testers: Roger Williams University, Johnson and Wales University, Wheaton College, and Community College of Rhode Island. Each of these institutions would recruit test subjects, but the EBSCO team will actually administer the tests. The test scenarios would be administered via a combination of in-person testing along with remote testing via the usertesting.com website.

The group agreed to meet again on March 30 to finalize methodology and identify specific testing dates for participating institutions.

5th Task Force Meeting: March 30 2015 @ Wheaton
Finalize usability test methodology and establish testing timeline

At the start of the meeting, Khalilah Gambrell (EBSCO User Research Consultant) distributed the HELIN Usability Test Plan with specific objectives and a prototype methodology for testing. From this document, the group was able to finalize a test plan and a timeline:

Test Objectives:
- Gain insight into HELIN users’ research workflows and expectations
- Evaluate patrons’ satisfaction with OneSearch
- Validate the personas created by the HELIN Data Analytics Task Force

Test subjects recruited from:
- Roger Williams University
- Wheaton College
- Community College of Rhode Island

- Johnson and Wales University

Test Methodology:

- In-person testing
    - RWU, CCRI
    - Three test subjects per institution, different personas
    - 30 minute test, 3-4 tasks, plus pre- and post-test questions
    - Requires a room with a computer; EBSCO will set up software to record each test
- Remote testing
    - Wheaton, JWU
    - Five test subjects per school, representing all 5 personas
    - 30 minute test, 3-4 tasks, plus pre- and post-test questions
    - Test subjects can take test any time via usertesting.com (voice and screen captures)

- Finalized list of personas
    - College Senior
    - Transitional Undergrad Student
    - Community College Student

- Tasks to be performed by each tester:
    1. Let's go to your library website. With three adjectives, tell me your thoughts about it.
    2. You are a student that has to complete a 10 page research paper on lucid dreaming. Conduct a search and find the two most relevant full text articles on this topic.
    3. Now tell me how you save the full text for one of those articles to review at a later date.
    4. You have been given an assignment to find New York Times articles about the debt ceiling published in the past 3 years.

Testing Timeline

- ASAP: Recruit participants (with offer of a $25 Amazon gift card, purchased by EBSCO, in exchange for participation)
- April 8th 2015: finalize test questions/scenarios
- April 13th 2015: In-person testing
- Week of April 13th 2015: Remote user testing window
- Week of April 27th 2015: Results/debriefing meeting

Khalilah was able to coordinate user testing via this timeline. In the end, testers were recruited at 3 schools: RWU, CCRI and Wheaton (JWU was unable to participate). The in-person testers were recorded on video. The remote testers' usertesting.com sessions were captured as part of the use of the website. (The Data Analytics Task Force owes special thanks to John Schlinke of RWU, Melanie Soter of CCRI, and Laruen Slingluff of Wheaton College for their test subject recruitment efforts.)

6th Task Force Meeting: April 28 2015 @ RWU
De-briefing meeting to examine results of OneSearch Usability Testing

The Task Force met with Khalilah Gambrell (EBSCO User Research Consultant) a final time via WebEx. The meeting was spent reviewing Khalilah's "HELIN Observations" Power Point slides, which documented the results of the testing and offered observations on the outcome. It was evident that even using a limited test pool, useful information about students' use of OneSearch could be extracted from the findings.

The complete report can be examined in detail here . Highlights of the findings are outlined below:

- There were 12 participants total - 4 seniors, 5 freshmen, 3 community college students.
- Seven out of the 12 participants had previous library information instruction.
- The most frequently used tool was Google (8 out of 12 participants). The second most frequently used took was the HELIN catalog (5 out of 12 participants).
- Google was used for topic overview, as a gateway to library resources.
- Most students had never used OneSearch. Those who did use it had previous library information instruction.
- Overall views about OneSearch: Most students (even ones who stated they used OneSearch previously) could not accurately describe differences between OneSearch and the HELIN Catalog:
    - "HELIN Catalog has everything that the library has."
    - "OneSearch has items that I may need to purchase or is not readily available."
    - "OneSearch and HELIN Catalog … "I see no difference."
    - "OneSearch has more results. Has a lot more stuff. "
    - "… like a Google search within the library databases."
    - "… all the things we are subscribed to."
    - "OneSearch had more results listed than the HELIN tab which makes me think it is more comprehensive. "
- What was liked most about OneSearch:

  - "I liked most that it has very detailed information on the search results page so I don't have to click through each link to see if it's what I can use."
  - "What I liked most about it was the ability to navigate through different links."
  - "I like the filters on the left-hand side - I didn't know those were there before, but they make it easy to refine the greater number of results you get with OneSearch."
  - "Help me to find the information I need"
- What was liked least about OneSearch:
  - I liked least that it seems to be the same as the HELIN search and that i couldn't use multiple filters of a certain filter subcategory (format, tag, availability, etc.)"
  - "What I didn't like about it was how sometimes I would come across a source without its content available for viewing. It made the searching process very tedious."
  - "Sometimes it's challenging to figure out how you can get access to texts on OneSearch, but usually there is a link you can click for the full text, or a link that will tell you if the book is within Wheaton's access."
  - "Didn't know how to use it."

- Observations and Recommendations from Khalilah Gambrell (EBSCO User Research Consultant):
  1. **Improve access points to OneSearch**. Almost all students had some difficulty in directly accessing OneSearch.
     Suggested solution: Implement single search box. Make OneSearch the default search. Add "ghost text" to search boxes, so student's eye is attached to the search box and they know to start typing.

  2. **Address students' "Google" expectations**. Students expect library search boxes to perform like Google does, entering sentence fragments and keyword strings.
     Suggested solution: Maintain requests for III and EBSCO to integrate their Full Text Finder API with Encore Duet (which would allow resource-specific searches directly from the search box). Explore plans for III and EBSCO to implement autocomplete features.

  3. **Address students' need for context in order to begin a search.** Students often need to get an overview of a topic before determining their research approach. Observed behavior from the usability testing suggests that they look outside of library resources for this initial step.
     Suggested solution: Implement EBSCO Research Starters, which are included with EBSCO Discovery Service and are available via each institution's EDS profile. Research Starters "offer short, citable summaries and authoritative overviews of more than 64,00 of the most popular topics

available through EBSCO Discovery Service (EDS)." It is anticipated that Research Starters will be incorporated into OneSearch (Encore Duet) by III in the next release (Rel. 4.5, 3Q 2015).

4. **More readily identify full-text resources and publication types.** Many students expected that clicking the title on the results list would take them directly to the full text. Some students also stated that they did not know what the button labels "PDF" or "HTML" meant.
   Suggested solution: User education (perhaps the most effective). Modify icons and links to better describe the resource (example: add the words "full text" to the PDF button). Make icons for each different format look unique.

5. **Improve "Advanced Search".** Some students went right to Advanced Search as a way to limit their search results. Some of the options to narrow their search were not available, which resulted in some searches returning irrelevant results.
   Suggested solution: Continue discussion with EBSCO and III on adding a robust set of search limiters in Advanced Search. (*Note*: Advanced Search Optimization is currently a part of Encore Release 4.5 targeted for a Q3 2015.)

6. **Emphasize the power of facets:** Most students did not notice the left-hand facets column immediately because they were focused on getting the results, but really liked facets once they used them and understood their benefits. (When asked what the options on the left-hand column are called, most participants responded with the term "filters").
   Suggested solution: User education. Re-review facet headings to mitigate terms that are too much like library jargon. Maintain request for III to allow for multiple facet selection.

Mini Reviews of Data Analysis Tools

Tableau

Reviewed by Julie Kliever, Providence College

What does it do?

Creates visual interactive graphics for viewing, understanding and interpreting data. Tableau visualizations start by linking to a datasource, then using the product interface to choose what fields to use for *dimensions* (those whose cells contain discretely enumerated items or dates) and *measures* (numeric values), mapping them onto columns and rows, choosing graph types, and picking colors and other customizations. Multiple visualizations can be linked together to create a narrative about what's been discovered via the visualization process. Charts can be published and shared internally via a paid version of the product, or uploaded and viewed on the Tableau website via the free version.

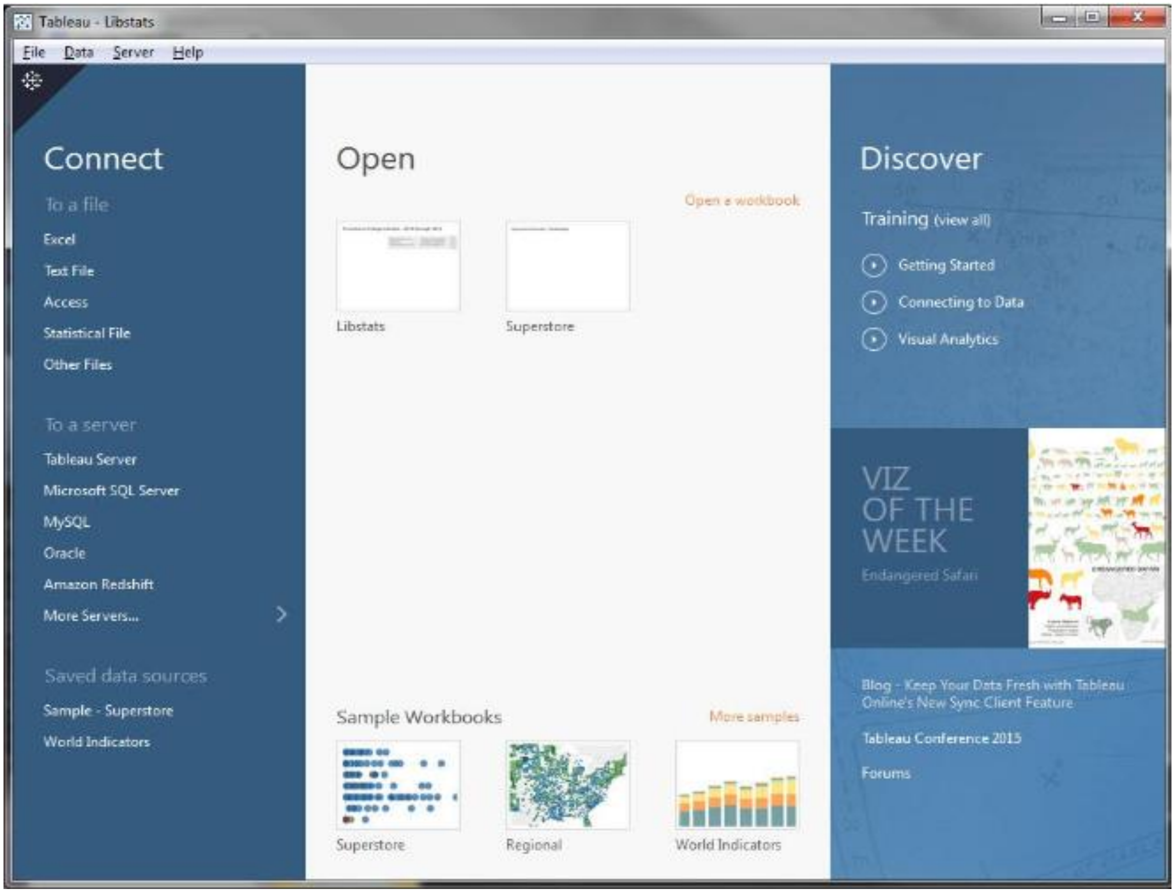


Tableau - Libstats
File Data Server Help
Connect
To a file
Excel
Text File
Access
Statistical File
Other Files
To a server
Tableau Server
Microsoft SQL Server
MySQL
Oracle
Amazon Redshift
More Servers...
Saved data sources
Sample - Superstore
World Indicators
Open
Open a workbook
Libstats
Superstore
Sample Workbooks
More samples
Superstore
Regional
World Indicators
Discover
Training (view all)
Getting Started
Connecting to Data
Visual Analytics
VIZ OF THE WEEK
Endangered Safari
Blog - Keep Your Data Fresh with Tableau Online's New Sync Client Feature
Tableau Conference 2015
Forums

Available versions are as follows:

Tableau Public

Price: free

Functionality: Create visualizations on Tableau public platform only, Connects to flat files only (Excel, CSV, Access). Not to be used for secure data. Does not connect to Server.

Tableau Desktop Professional

Price: $1,500 per user ($300 maintenance included in first year purchase)

Functionality: Create visualizations from any source (flat files, relational databases, cubes). Publish to Tableau Server.

Tableau Desktop Personal

Price: $750 per user ($150 maintenance included in first year purchase)

Functionality: Connects to flat files only (Excel, CSV, Access). Publish to own desktop.

Tableau Server (Named User)

Price: Logins are $750 per user/license ($150 maintenance included in first year purchase) With Named-User licensing, you are licensing the individual, not the hardware.

Minimum configuration offered is 10 logins, priced at $7,500

Functionality: Enterprise hosting platform for Desktop Professional

Tableau Online

Price: $500/per user per year subscription

Functionality: hosted and cloud-based, eliminates need for your organization to run Tableau Server

Tableau Reader

Price: free

Functionality: Used to view and manipulate charts created by others. Eliminates need to purchase additional licenses to allow others to view and manipulate (but not create) charts.

Useful features:

- Tableau Desktop connects to dozens of data sources (from flat file to Excel spreadsheet to PostGresSQL database) [full list here http://www.tableau.com/solutions/data-sources]
Can connect to a live database as well as a saved file.
Tableau Public connects to a limited number of data types
- Drag-and-drop customization from fields in file/database. Click to change colors, graph styles, data points.
- Can change field names/data types when data is imported, while leaving source file unchanged.
- Can join two or more worksheets in a spreadsheet if they contain a common field, to expand visualization.
- Can graph multiple values onto each column or row
- Data is interactive; viewer can select and deselect graph components so as to only see specific choices.
- create a "story" - a click-through sequence of graphs that creates a captioned narrative of the data you are displaying

Examples of use

Analysis of Libstats data from 2012 through 2014, which has been exported to an Excel spreadsheet

- Open Tableau, connect to spreadsheet
- Choose data to display: Number of records, day of week, patron type
- Choose visualization format ("packed bubbles") pictured below:

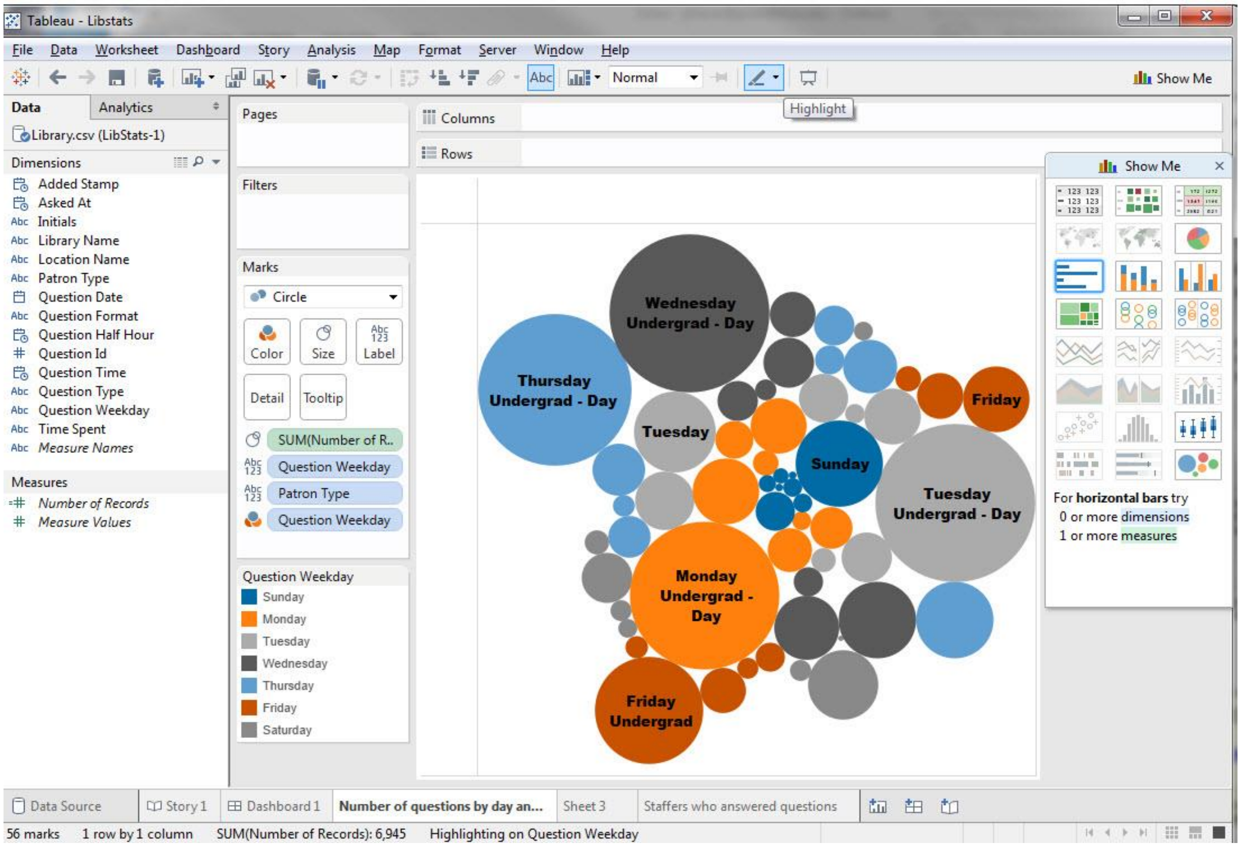


Tableau - Libstats
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Normal
Show Me
Highlight
Data Analytics
Library.csv (LibStats-1)
Dimensions
Added Stamp
Asked At
Initials
Library Name
Location Name
Patron Type
Question Date
Question Format
Question Half Hour
Question Id
Question Time
Question Type
Question Weekday
Time Spent
Measure Names
Measures
Number of Records
Measure Values
Pages
Filters
Marks
Circle
Color
Size
Label
Detail
Tooltip
SUM(Number of R..
Question Weekday
Patron Type
Question Weekday
Question Weekday
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Columns
Rows
Wednesday Undergrad - Day
Thursday Undergrad - Day
Tuesday
Friday
Sunday
Tuesday Undergrad - Day
Monday Undergrad - Day
Friday Undergrad
Show Me
For horizontal bars try
0 or more dimensions
1 or more measures
Data Source
Story 1
Dashboard 1
Number of questions by day an...
Sheet 3
Staffers who answered questions
56 marks
1 row by 1 column
SUM(Number of Records): 6,945
Highlighting on Question Weekday

- publish to web (Tableau Public) or save to desktop or server (Tableau Desktop)
- Example of multiple analyzations of Libstats data uploaded to Tableau Public https://public.tableau.com/profile/hailie.posey#!/vizhome/shared/9H9SQ5Q2T

Comment/Discussion:

Tableau is an extremely robust data visualization tool that does not require extensive training for initial use. That being said, the product has many components and features for enhancing visualizations and narratives that do require instruction and time to learn, for which there are online video tutorials. For one-off analysis of library data, the free version may be sufficient (provided you feel comfortable uploading the data for public viewing). For ongoing analysis, or to work with data that cannot be shared, the paid version may be necessary.

More Info/See Also:

Association of Research Libraries recording of webcast from March 2015: Data Visualization for Libraries using Tableau:

https://www.youtube.com/watch?v=PM9HdJ-LROM

On-demand tutorials for learning Tableau:

http://www.tableau.com/learn/training

Visual Gallery of Tableau Examples

http://www.tableau.com/learn/gallery

Use/get it from:

http://www.tableau.com/

Google Analytics

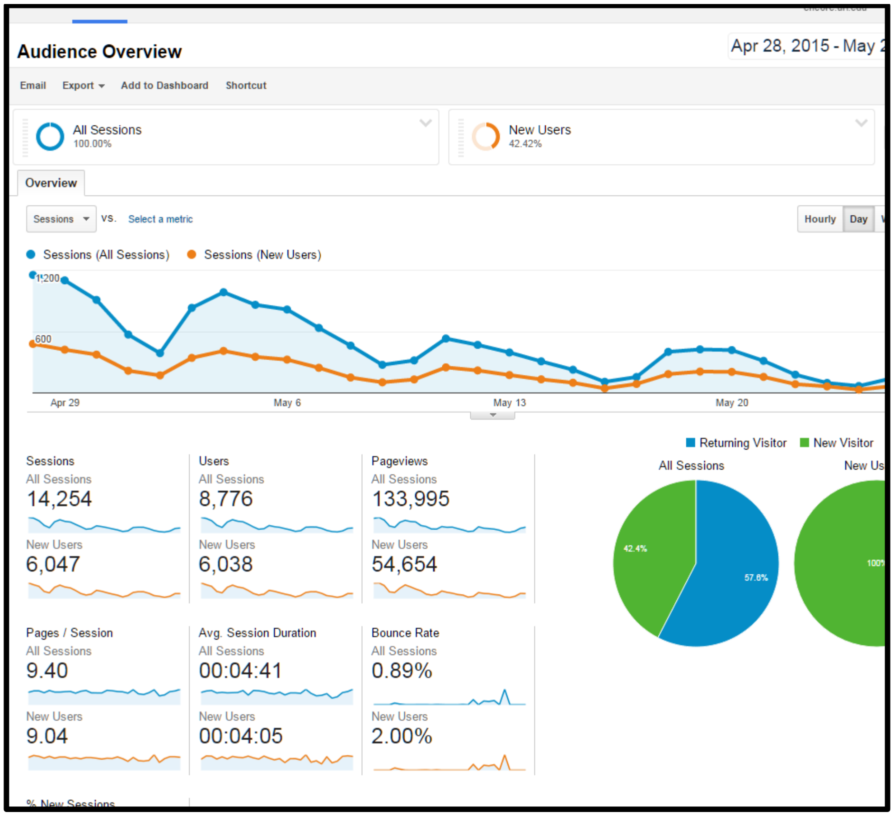
Reviewed by David Meincke, JWU and Lauren Slingluff, Wheaton College

What does it do?

Gathers website usage statistics in real time
Data analysis and visualization
Create customizable dashboards to show data in real time

Useful features:

- Provides multiple ways to zoom (or ‘drill down’) into data (countless ways to combined metrics and dimensions).
- Analyze web data with built-in reports (or create custom reports)
- Can be integrated with other data services (Tableau, R, etc.)


Audience Overview
Apr 28, 2015 - May 2
Email
Export
Add to Dashboard
Shortcut
All Sessions
100.00%
New Users
42.42%
Overview
Sessions
vs.
Select a metric
Hourly
Day
Sessions (All Sessions)
Sessions (New Users)
1,200
600
Apr 29
May 6
May 13
May 20
Returning Visitor
New Visitor
All Sessions
New Us
42.4%
57.6%
100%

Sessions
All Sessions
14,254
New Users
6,047

Users
All Sessions
8,776
New Users
6,038

Pageviews
All Sessions
133,995
New Users
54,654

Pages / Session
All Sessions
9.40
New Users
9.04

Avg. Session Duration
All Sessions
00:04:41
New Users
00:04:05

Bounce Rate
All Sessions
0.89%
New Users
2.00%

% New Sessions

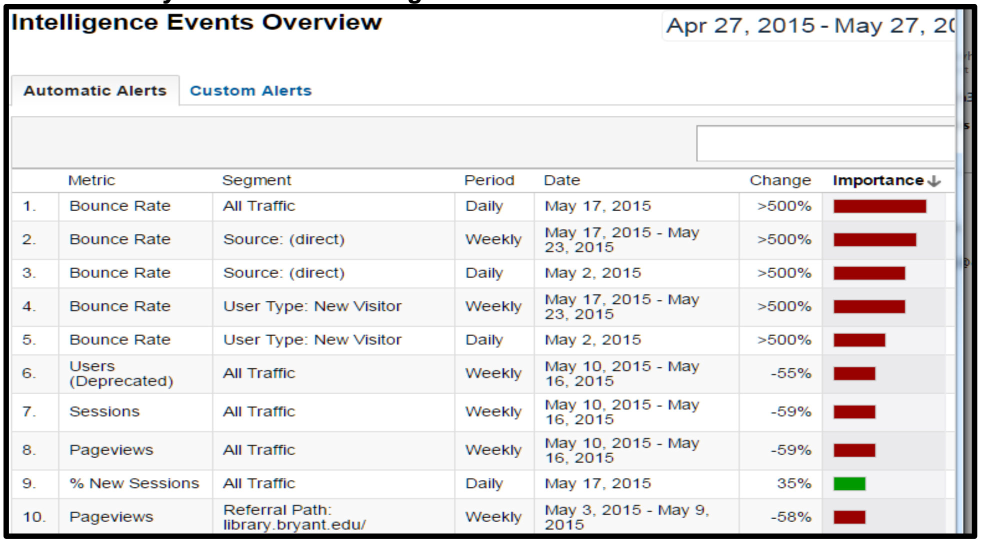
When/why to use

1. For general website performance monitoring
    a. ...through **Dashboards:** For monitoring website activity and performance (in real time) through customizable, sharable real time dashboards.
    b. (see ***Audience Overview Screenshot for an example of a dashboard*** →).

    ...also...

    c. through **Intelligence Events:** Google Analytics also automatically creates "Intelligence Events")...Email alerts can also be set up when certain conditions occur on the website via ***Intelligence Events (see screenshot on next page)***

Automatically Generated “Intelligence Events”

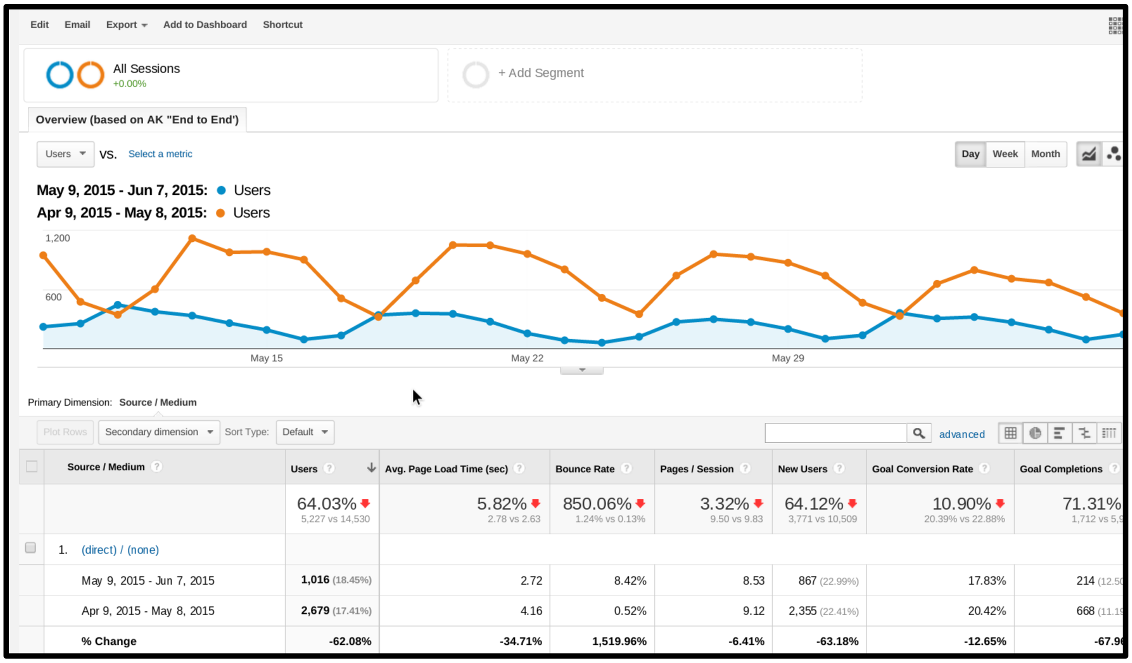


Intelligence Events Overview

Apr 27, 2015 - May 27, 2

	Metric	Segment	Period	Date	Change	Importance ↓
1.	Bounce Rate	All Traffic	Daily	May 17, 2015	>500%	🟥
2.	Bounce Rate	Source: (direct)	Weekly	May 17, 2015 - May 23, 2015	>500%	🟥
3.	Bounce Rate	Source: (direct)	Daily	May 2, 2015	>500%	🟥
4.	Bounce Rate	User Type: New Visitor	Weekly	May 17, 2015 - May 23, 2015	>500%	🟥
5.	Bounce Rate	User Type: New Visitor	Daily	May 2, 2015	>500%	🟥
6.	Users (Deprecated)	All Traffic	Weekly	May 10, 2015 - May 16, 2015	-55%	🟥
7.	Sessions	All Traffic	Weekly	May 10, 2015 - May 16, 2015	-59%	🟥
8.	Pageviews	All Traffic	Weekly	May 10, 2015 - May 16, 2015	-59%	🟥
9.	% New Sessions	All Traffic	Daily	May 17, 2015	35%	🟩
10.	Pageviews	Referral Path: library.bryant.edu/	Weekly	May 3, 2015 - May 9, 2015	-58%	🟥

2. Customizable tracking scripts for web sites and services
    a. In this [http://journal.code4lib.org/articles/10311] instance (DLIB article, demonstrating how to use “Google Tag Manager and Google Analytics to track DSpace metadata fields as custom dimensions”). This might be more advanced an implementation than we need, but we can likely use this as a starting point to help us get up and running with whatever customized tracking scripts we would like to create.
3. Overall library service performance improvement
    a. Potentially useful for targeted inquiries (especially with variables that are linked/correlated to aspects of library services HELIN would like to measure.
    b. Can set measurable performance goals, measure website behavior in relation to these goal
    c. Create usage reports that can be tracked against previous cycles of time ***(Month-to-month website usage comparison stats...SCREENSHOT BELOW)***


Edit
Email
Export
Add to Dashboard
Shortcut
All Sessions
+0.00%
+ Add Segment
Overview (based on AK "End to End')
Users
VS.
Select a metric
Day
Week
Month
May 9, 2015 - Jun 7, 2015: ● Users
Apr 9, 2015 - May 8, 2015: ● Users
1,200
600
May 15
May 22
May 29
Primary Dimension: Source / Medium
Plot Rows
Secondary dimension
Sort Type:
Default
advanced

☐	Source / Medium	Users	Avg. Page Load Time (sec)	Bounce Rate	Pages / Session	New Users	Goal Conversion Rate	Goal Completions
		64.03% 5,227 vs 14,530	5.82% 2.78 vs 2.63	850.06% 1.24% vs 0.13%	3.32% 9.50 vs 9.83	64.12% 3,771 vs 10,509	10.90% 20.39% vs 22.88%	71.31% 1,712 vs 5,9
☐	1. (direct) / (none)							
	May 9, 2015 - Jun 7, 2015	**1,016** (18.45%)	2.72	8.42%	8.53	867 (22.99%)	17.83%	214 (12.5
	Apr 9, 2015 - May 8, 2015	**2,679** (17.41%)	4.16	0.52%	9.12	2,355 (22.41%)	20.42%	668 (11.1
	% Change	**-62.08%**	**-34.71%**	**1,519.96%**	**-6.41%**	**-63.18%**	**-12.65%**	**-67.9**

Comment/Discussion:
Google Analytics is a very rich tool for exploring website usage data. The built-in reporting features make it so that a lot of simple data analysis can be done within the google analytics platform. There are also a number of customizations that can be made.

There are a few ways to get data in/out of Google Analytics. A premium account is required for more robust data import/export tools (the free version of GA limits data exports (and makes it kind of tricky to export large data sets). There may be some possibilities for automation and quick ‘big data’ data mining/ extraction, however, as well as for integrating with software such as Tableau, R, Google Sheets and others. For now, the quickest way to get data out of Google Analytics seems to be the “Save to Sheets’ feature (Google Analytics reports can be saved directly to a Google Drive spreadsheet...see figure to the right), which is quite convenient and could be very useful for the group.

In the short term, it would be useful to have a customized report dashboard that can be shared (as with other google products, the custom analytic reports are shareable and somewhat collaborative.) It would likely be helpful if a group of representatives from the HELIN libraries sat down and discussed which metrics should be measured. Also, an Analytics Plan (in which Google Analytics is only part of an overall Analytics lifecycle) is highly recommended. This may involve continual refinement on a regular basis (quarterly? twice a year?).

Get started at:
Google Analytics (official site) **https://www.google.com/analytics/web/?hl=en**
Free (with a Google account)

Recommended Resources:

Google Analytics Guide of Epic Proportions from Builtvisible
http://builtvisible.com/google-analytics-resource-guide/

Google Analytics Academy
https://analyticsacademy.withgoogle.com/explorer

Google Analytics Spreadsheet add-on (quite useful for quick and easy data export)
https://developers.google.com/analytics/solutions/google-analytics-spreadsheet-add-on

Google Analytics Query Explorer (good way to explore metrics to use when creating custom reports/views)
https://ga-dev-tools.appspot.com/query-explorer/

EBSCO Data and Statistics

Reviewed by John Schlinke, RWU and Sue McMullen, RWU

What does it do?

Usage data and statistics for EBSCO*host* electronic resources as well as other resources included in an EBSCO Discovery Service (EDS) profile are available through the EBSCO*admin* website at http://eadmin.epnet.com or http://admin.ebscohost.com. As stated on the EBSCO support website - "EBSCO*admin* automatically collects EBSCO*host* usage statistics [and statistics for other resources included in an EDS profile] within your library system or consortium. These statistics measure how often titles and databases are searched. Title, database, session and link activity statistics can be collected for specific time periods (monthly or annually), limited to a specific data field, and sorted. These reports can be viewed or e-mailed in HTML, Tab Delimited or Comma Delimited format. (COUNTER R4 Reports can be exported in Excel format only.)"

Useful features:

Libraries can create a variety of data report types within two categories - Standard Reports and COUNTER Reports. Libraries can schedule Standard Reports to be automatically created and emailed to them on a regular schedule. In addition to the data reports that libraries can create and schedule themselves, there are also other report types that can be scheduled through EBSCO Technical Services.

Standard Reports

1. Interface Usage Report - Provides the number of times users have accessed EBSCO through various profiles, for example: OneSearch, Ehost (single database access), EDS, and EBSCOhost Mobile. It also shows the numbers and types of requests resulting from these sessions/searches, including: Total Full Text, PDF Full Text, HTML Full Text, Image/Video, Audio, Abstract, Smart Link to, and Custom Link. Interface Usage Report Help Sheet

2. Graphical Interface Usage Report - Provides interface usage data (similar to above), but in graphical form (choose from column graph, bar graph, line graph, or pie chart). Available data on requests is limited to Total Full Text requests. Graphical Interface Usage Report Help Sheet

3. Database Usage Report - Provides the number of times users have accessed specific EBSCO databases through various profiles: OneSearch, Ehost (single database access), EDS, and EBSCOhost Mobile. It also shows the numbers and types of requests resulting from these sessions/searches, including: Total Full Text, PDF Full Text, HTML Full Text, eBook Online Full Text, eBook Offline Download, Image/Video, Audio, Abstract, Smart Link to, Smart Link from, and Custom Link. Database Usage Report Help Sheet

4. Graphical Database Usage Report - Provides database usage data (similar to above), but in graphical form (choose from column graph, bar graph, line graph, or pie chart). Available data on requests is limited to Total Full Text requests. Graphical Database Usage Report Help Sheet

5. Session Usage Report - Similar to an Interface Usage Report. Specifically provides the number of sessions users have accessed EBSCO (either as a total or broken down into the various profiles), and provides the numbers and types of requests resulting from these sessions. Session Usage Report Help Sheet

6. Title Usage Report - Shows all the publication titles available via subscribed EBSCO Information Services databases and provides the numbers and types of requests made for each title, including: Total Full Text, PDF Full Text, HTML Full Text, eBook Online Full Text, eBook Offline Download, Image/Video, Audio, Abstract, Smart Link to, and Custom Link.

7. IP Usage Report - Lists all the IP addresses from which sessions originated, and the number of sessions associated with each IP address.

8. Browser and Device Report - Lists the number of sessions that originated from various browser, hardware, and operating system or platform combinations. Provides the browser version (if available), hardware vendor and model (if available), and whether the device used to originate the session was mobile or not.

9. Link Activity by Target Report - Lists the full-text sources that users linked to, and the number of times users linked to each specific source. Link Activity Report Help Sheet

COUNTER Reports

A definition of COUNTER from the EBSCO*admin* Reports Glossary of Terms:
"Launched in March 2002, COUNTER (Counting Online Usage of Networked Electronic Resources) is an international initiative designed to serve librarians, publishers and intermediaries by facilitating the recording and exchange of online usage statistics. Statistics run using this area of the EBSCOadmin Reporting & Statistics module

comply with the current COUNTER 2 standards. For more information please go here: http://www.projectcounter.org/about.html "

1. Book Report 1 (R4) - Provides the number of successful title requests from EBSCO eBooks. Lists the title, publisher, and ISBN for each eBook requested, the number of times it was requested, and a total number of eBook requests.

2. Book Report 2 (R4) - Provides the number of successful book section (defined as "chapter") requests from EBSCO eBooks. For each book section requested, the title, publisher, and ISBN of the eBook is listed (when available), the number of times the section was requested, and a total number of section requests.

3. Book Report 3 (R4) - Provides the number of times access was denied to items in EBSCO eBooks. Lists the title, publisher, and ISBN for each eBook to which access was denied, the number of times access was denied, and a total number of eBook access denials.

4. Database Report 1 (R4) - For each EBSCO database, the following information is provided:

- Regular Searches - the number of times a search was conducted in the native database.
- Federated and Automated Searches - the number of times a search of the database was conducted as part of a federated or automated search process.
- Result Clicks - the number of times that users clicked on a link contained in a search result (for example, a link to the detailed view, a link resolver, etc.).
- Record Views - the number of times an abstract or a detailed view of a record was viewed.

5. Database Report 2 (R4) - Provides the number of times access was denied to EBSCO databases. Lists the database name, the reason for denial, and the number of denials recorded.

6. Journal Report 1 (R4) - Provides the number of successful full-text article requests. Lists the title, publisher, and ISSN for the source journals, the number of HTML articles requested, the number of PDF articles requested, and the combined total of article requests.

7. Journal Report 5 (R4) - Provides the number of successful full-text article requests by journal title and year-of-publication. Lists the title, publisher, and ISSN for the source journals, and the total of number of article requests from each for journal by year-of-publication.

8. Platform Report 1 (R4) - For each platform, provides a monthly total of Regular Searches, Federated and Automated Searches, Result Clicks, and Record Views, along with a combined total for the reporting period. See Database Report 1 above for definitions of these terms.

EBSCO Generated Reports

1. Search Click Report - This report may be scheduled through EBSCO Technical Services to be supplied on a regular basis (it may eventually be available through EBSCO*admin*). It provides the number of times users click on Search. It can be broken down by profile and it does not duplicate searches across all the databases).

2. Top Search Terms Report - Libraries can request a report listing top search terms used by their patrons.

3. HELIN-wide Reports - The HELIN consortium can request reports listing and comparing data from the member libraries.

When to use:

There is a wealth of data available to the HELIN libraries and each library will want to decide what data to extract and analyze. Staff members at each of the libraries who are responsible for creating data reports will need training. EBSCO provides online training documents and tutorials (see "More Info/See Also" below for links). Because many of the data definitions are nuanced though, it is recommended that staff members train directly with an EBSCO trainer so they can easily have questions answered - either in-person or by webinar.

Comment/Discussion:

In addition to reports created by individual member libraries, it is possible to create consortial data reports across the HELIN libraries. Such reports must be created by EBSCO rather than by an individual library in the consortium. It is assumed the HELIN library directors will want to decide on what report(s) to request from EBSCO, and on what schedule.

More Info/See Also:

Before creating a report and analyzing data, it is wise to get an overview of what data are available, how those data are defined, and how to create a report. EBSCO provides a number of useful support documents and tutorials online:

EBSCO*admin* Reports - Glossary of Terms

EBSCO*admin* Standard Reports Column Headings

EBSCO Discovery Service - Understanding Reports & Statistics Reference Guide

EBSCO Tutorials

EBSCO Support - Training

Use/get it from:

EBSCO*admin* website - http://eadmin.epnet.com or http://admin.ebscohost.com
Note: Access requires a User ID and Password.

EBSCO Technical Support -
Phone: (800) 758-5995
Email: support@ebsco.com

EBSCO Training requests -
customsuccess@ebsco.com

Sierra data and statistics
Sustainable Collections Service's GreenGlass

Reviewed by Judith Stokes, Rhode Island College

Greenglass by Sustainable Collection Services (an OCLC company)
http://www.sustainablecollections.com

Sustainable Collection Services provides collection data and analysis for libraries. The service is priced on a base fee plus a per-record charge and is designed to inform deselection of circulating monographs. Greenglass is the name of the online interactive filtering software that allows librarians to manipulate multiple criteria to inform deselection. Data points include numbers of holdings of the same and/or any edition of each book in numerous customer-selected libraries/consortia (based on OCLC holdings), links to reviews in Choice and/or status as Choice Outstanding Academic Titles, subject classification, location, date published, date acquired, and date of last use, as well as numbers of circulations. Thus, librarians can easily identify rare books, as well as widely available low-use titles based on different criteria for books on specific subjects in specific locations acquired during specific periods. Detailed lists are extracted in spreadsheets that may be edited for consultation with faculty or for collection of books from the stacks.

(NOTE: Shortly after this review was complied, Sustainable Collections Services was purchased by OCLC.)

Sierra Statistics Module

The Statistics Module is a tool for creating statistical reports based on data in the fixed fields of Innovative catalog records, including item, check-in or order records as well as bibliographic records. Running queries against the entire database is tricky, but working on review files is easy. I would run a cross tabulation on a review file of RIC bibliographic records, for example, to find out how many Spanish language DVDs in our collection. Running a particular query at specific intervals can provide snapshots of order receipts or circulation activity, for example, at specific points in the year. As more electronic holdings are being managed in EDS and not cataloged, however, Sierra statistics on e-resources are incomplete at best.

Sierra Web Management Reports

Reviewed by Ruth Souto, HELIN Central Office

The Web Management Reports analyze transaction-based information from HELIN

What can it do?

- Circulation activity (including InRhode and E-Reserves)
- Collection Development reporting tools (age of collection,
- Acquisitions Fund Reports

Useful features:

Report Options

There are a number of available reports. Initially, the report options are grouped according to data type. When you choose a group report option from the menu, the system then displays a list of individual report options in the menu. When you choose individual report options and choose the **Submit** button, the report data appears in the Report frame.

Many of the individual reports are included in multiple group lists. For example, you can view the Age of Collection report by choosing the **Cross-Tab**, **Age of Coll**, **Coll Dev**, or **Site Activity** report option.

Group report options include:

OPTION	DESCRIPTION
Patron Searches	Displays options for viewing individual reports on patron searches.
Web Access	Displays options for downloading Web Access Management reports.
E-Reserves	Displays options for individual reports on electronic reserves.
User Functions	Displays options for viewing individual reports on user activity in patron records in the WebPAC.
Circ Activity	Displays options for viewing individual reports on circulation activities.
Cross-Tab	Displays options for viewing individual cross-tab reports on circulation activities.
Age of Coll	Displays options for viewing individual Age of Collection reports.
Coll Dev	Displays options for viewing individual Collection Development reports.
Fund Reports	Displays options for viewing individual fund reports
Vendor Info	Displays options for viewing individual vendor activity reports.
Site Activity	Displays options for viewing the INN-Reach circulation reports. This option is only present on INN-Reach Local Servers.
Fulfillment	Displays options for viewing the INN-Reach patron reports. This option is only present on INN-Reach Central Servers.

When to use:

Best used for gathering monthly (or any relevant time-frame) circulation statistics, or for identifying the age of your library's collection, or viewing Fund Reports

Comment/Discussion:

- Available to everyone with a Sierra login

More Info/See Also:

- Sierra manual, keyword: web management report

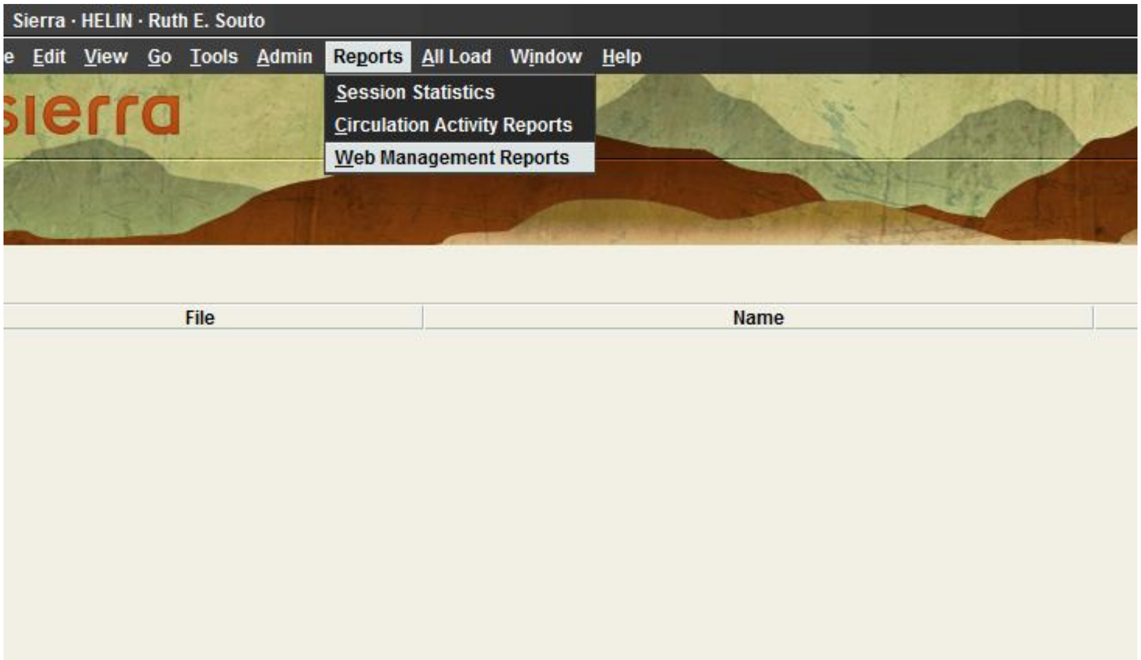
Use/get it from:

- There are 2 ways to access Web Management Reports.

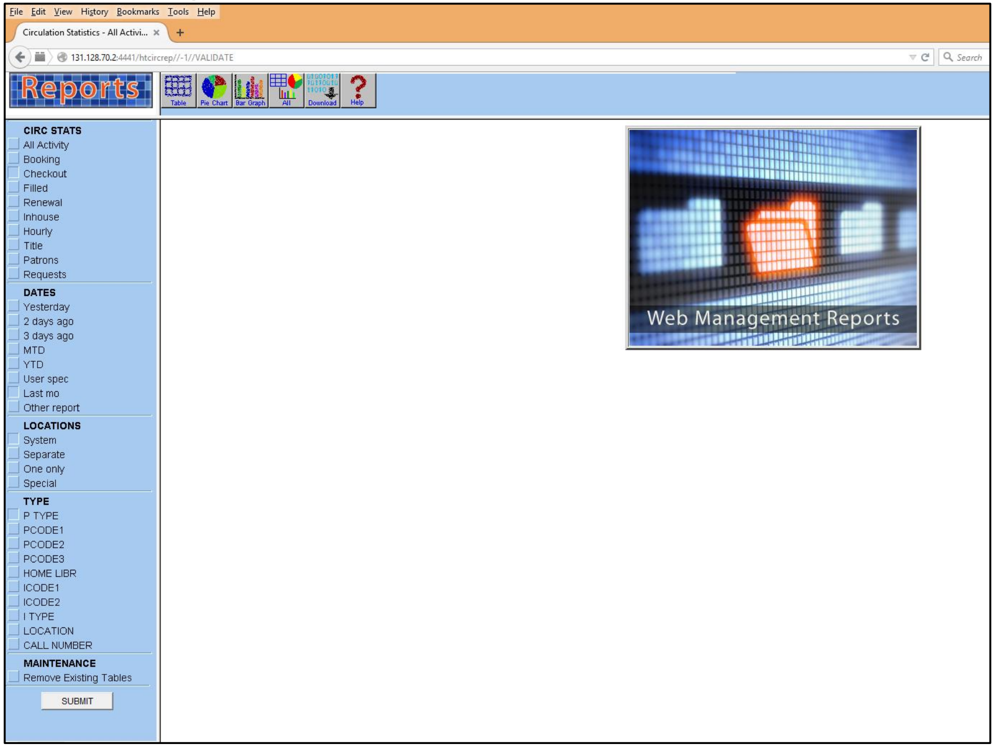
1.) From your Sierra session (Reports – Web Management Reports)
2.) Directly from http://helin.uri.edu/manage (access is the same as your Sierra login)

Screenshot examples:

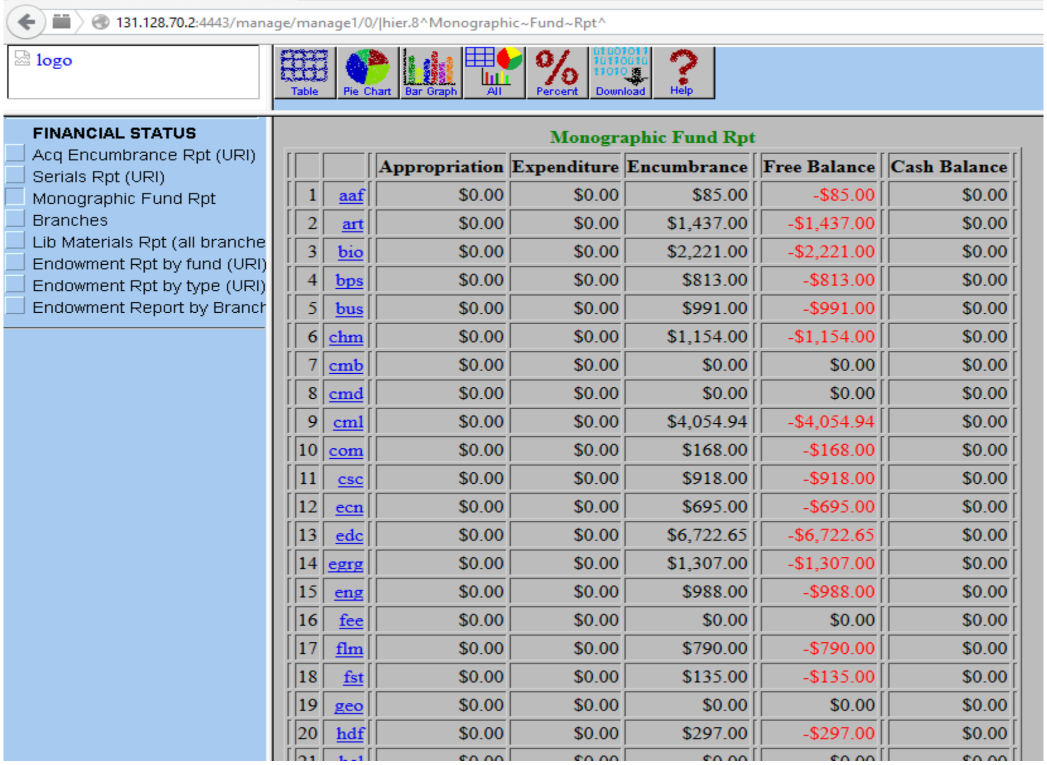
To access From Sierra:


Sierra · HELIN · Ruth E. Souto
e Edit View Go Tools Admin Reports All Load Window Help
Session Statistics
Circulation Activity Reports
Web Management Reports
sierra
File
Name

Circulation reports:


File Edit View History Bookmarks Tools Help
Circulation Statistics - All Activi...
131.128.70.2:4441/htcircrep//-1//VALIDATE
Search
Reports
Table
Pie Chart
Bar Graph
All
Download
Help
CIRC STATS
☐ All Activity
☐ Booking
☐ Checkout
☐ Filled
☐ Renewal
☐ Inhouse
☐ Hourly
☐ Title
☐ Patrons
☐ Requests
DATES
☐ Yesterday
☐ 2 days ago
☐ 3 days ago
☐ MTD
☐ YTD
☐ User spec
☐ Last mo
☐ Other report
LOCATIONS
☐ System
☐ Separate
☐ One only
☐ Special
TYPE
☐ P TYPE
☐ PCODE1
☐ PCODE2
☐ PCODE3
☐ HOME LIBR
☐ ICODE1
☐ ICODE2
☐ I TYPE
☐ LOCATION
☐ CALL NUMBER
MAINTENANCE
☐ Remove Existing Tables
SUBMIT
Web Management Reports

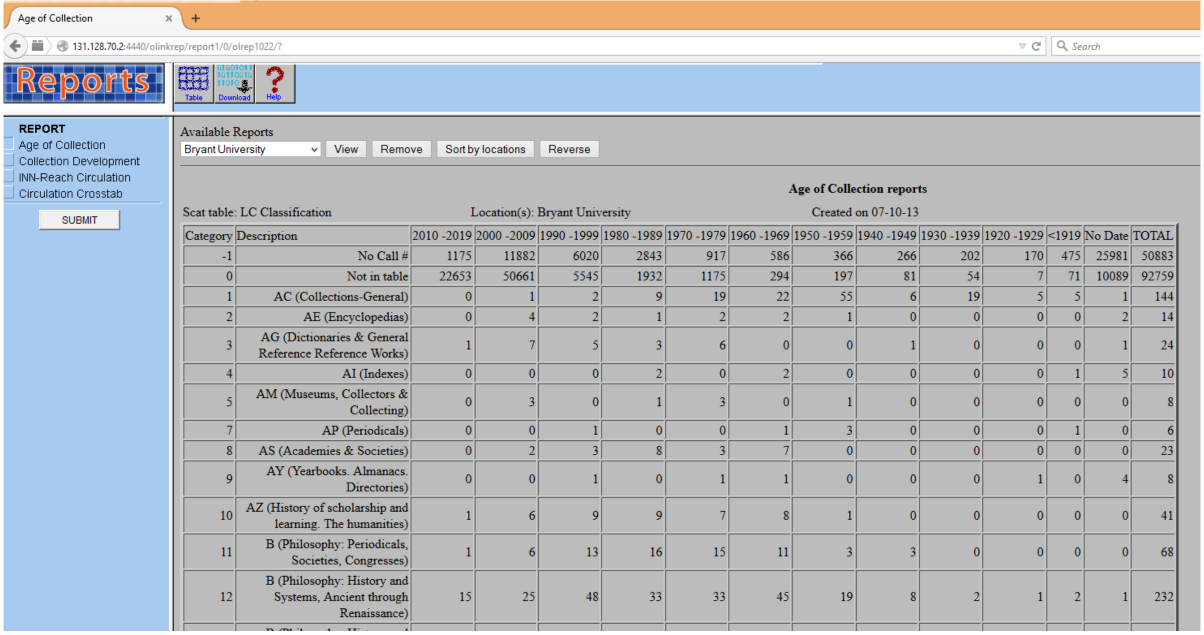
Fund Reports-


Monographic Fund Rpt
131.128.70.2:4443/manage/manage1/0/|hier.8^Monographic~Fund~Rpt^
logo
Table
Pie Chart
Bar Graph
All
Percent
Download
Help
FINANCIAL STATUS
☐ Acq Encumbrance Rpt (URI)
☐ Serials Rpt (URI)
☐ Monographic Fund Rpt
☐ Branches
☐ Lib Materials Rpt (all branche
☐ Endowment Rpt by fund (URI)
☐ Endowment Rpt by type (URI)
☐ Endowment Report by Branch

Monographic Fund Rpt

		Appropriation	Expenditure	Encumbrance	Free Balance	Cash Balance
1	aaf	$0.00	$0.00	$85.00	-$85.00	$0.00
2	art	$0.00	$0.00	$1,437.00	-$1,437.00	$0.00
3	bio	$0.00	$0.00	$2,221.00	-$2,221.00	$0.00
4	bps	$0.00	$0.00	$813.00	-$813.00	$0.00
5	bus	$0.00	$0.00	$991.00	-$991.00	$0.00
6	chm	$0.00	$0.00	$1,154.00	-$1,154.00	$0.00
7	cmb	$0.00	$0.00	$0.00	$0.00	$0.00
8	cmd	$0.00	$0.00	$0.00	$0.00	$0.00
9	cml	$0.00	$0.00	$4,054.94	-$4,054.94	$0.00
10	com	$0.00	$0.00	$168.00	-$168.00	$0.00
11	csc	$0.00	$0.00	$918.00	-$918.00	$0.00
12	ecn	$0.00	$0.00	$695.00	-$695.00	$0.00
13	edc	$0.00	$0.00	$6,722.65	-$6,722.65	$0.00
14	egrg	$0.00	$0.00	$1,307.00	-$1,307.00	$0.00
15	eng	$0.00	$0.00	$988.00	-$988.00	$0.00
16	fee	$0.00	$0.00	$0.00	$0.00	$0.00
17	flm	$0.00	$0.00	$790.00	-$790.00	$0.00
18	fst	$0.00	$0.00	$135.00	-$135.00	$0.00
19	geo	$0.00	$0.00	$0.00	$0.00	$0.00
20	hdf	$0.00	$0.00	$297.00	-$297.00	$0.00

Collection Development-


Age of Collection
131.128.70.2:4440/olinkrep/report1/0/olrep1022/?
Search
Reports
Table
Download
Help
REPORT
Age of Collection
Collection Development
INN-Reach Circulation
Circulation Crosstab
SUBMIT
Bryant University
View
Remove
Sort by locations
Reverse

Available Reports

Age of Collection reports

Scat table: LC Classification   Location(s): Bryant University   Created on 07-10-13

Category	Description	2010 -2019	2000 -2009	1990 -1999	1980 -1989	1970 -1979	1960 -1969	1950 -1959	1940 -1949	1930 -1939	1920 -1929	<1919	No Date	TOTAL
-1	No Call #	1175	11882	6020	2843	917	586	366	266	202	170	475	25981	50883
0	Not in table	22653	50661	5545	1932	1175	294	197	81	54	7	71	10089	92759
1	AC (Collections-General)	0	1	2	9	19	22	55	6	19	5	5	1	144
2	AE (Encyclopedias)	0	4	2	1	2	2	1	0	0	0	0	2	14
3	AG (Dictionaries & General Reference Reference Works)	1	7	5	3	6	0	0	1	0	0	0	1	24
4	AI (Indexes)	0	0	0	2	0	2	0	0	0	0	1	5	10
5	AM (Museums, Collectors & Collecting)	0	3	0	1	3	0	1	0	0	0	0	0	8
7	AP (Periodicals)	0	0	1	0	0	1	3	0	0	0	1	0	6
8	AS (Academies & Societies)	0	2	3	8	3	7	0	0	0	0	0	0	23
9	AY (Yearbooks. Almanacs. Directories)	0	0	1	0	1	1	0	0	0	1	0	4	8
10	AZ (History of scholarship and learning. The humanities)	1	6	9	9	7	8	1	0	0	0	0	0	41
11	B (Philosophy: Periodicals, Societies, Congresses)	1	6	13	16	15	11	3	3	0	0	0	0	68
12	B (Philosophy: History and Systems, Ancient through Renaissance)	15	25	48	33	33	45	19	8	2	1	2	1	232

Supporting Documents:

- HELIN Pretest Planning Guide
  Information and literature review on usability studies, used to come up with planning tasks.

- HELIN Usability Test Plan
  Outlines specific steps for HELIN OneSearch Prototype Usability Study

- HELIN Observations from Khalilah Gambrell
  Detailed account of results and findings from prototype OneSearch Usability Testing, conducted at RWU, CCRI and Wheaton College during the week of April 13, 2015

- HELIN 2007 Statistics Committee Environmental Scan
  An example of data analysis work conducted by a previous HELIN Committee, brought to the Data Analytics Task Force’s attention by Ruth Souto (HELIN Central Office) .