

Simplifying Systematic Reviews: Development of a Health Science Research Toolbox

Uday Patil¹, Melissa Kahili-Heede², K.J. Hillgren²

¹ Office of Public Health Studies, University of Hawai'i at Mānoa, Honolulu, HI

² Health Sciences Library, John A. Burns School of Medicine, University of Hawai'i at Mānoa, Honolulu, HI

uday@hawaii.edu
hslib.jabsom.hawaii.edu/systematicreview



RESULTS

In the 2019 academic year, there have been 3,668 views. This figure surpasses all 51 other LibGuides that were public during this period, except for a practical guide providing resources to first-semester medical students.

In the month preceding September 25, 2020, there have been 458 views. Approximately 10% of views were from mobile devices. More than 90% of traffic was referred from Google, not the library homepage. Regarding resources, roughly 81% of views were of the Quality Assessment and Data Extraction sections. Those who interacted with those pages viewed the resources for at least five minutes, on average.

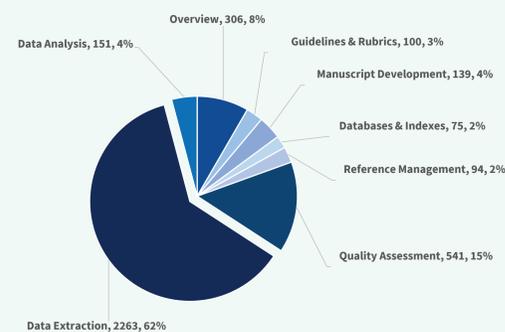


Figure 2: Toolbox Section Views, Academic Year 2019-20 (n=3668)

3668 views

Academic year 2019-20

81 percent

Views of Quality Assessment and Data Extraction sections, 8/25-9/25, 2020

5 minutes

Time spent by those who interact in Quality Assessment and Data Extraction sections, 8/25-9/25, 2020

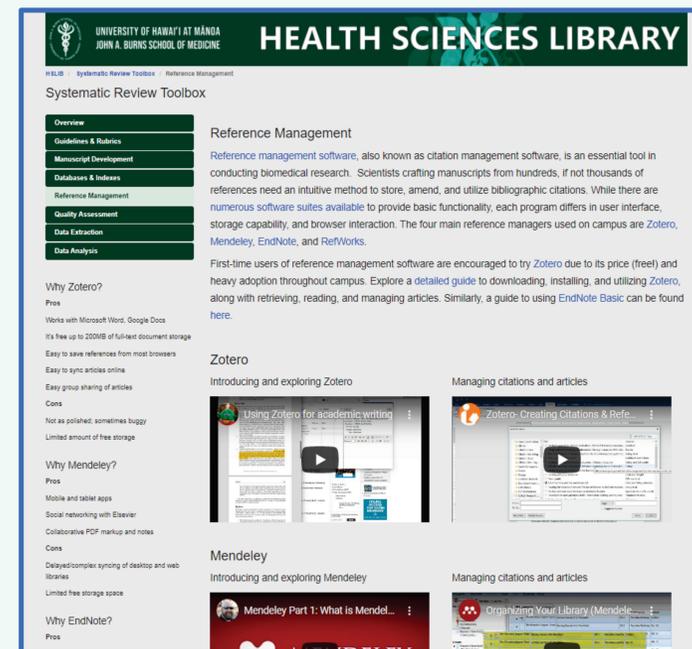


Figure 3: Desktop Website

BACKGROUND

The demand for biomedical and social science systematic reviews (SR) has grown considerably over the past decade (McKenzie & Brennan, 2017). Librarians in medical facilities and health science departments are often tasked with training students and faculty to conduct reviews (Nicholson et al., 2017; Spencer & Eldredge, 2018). While resources and tutorials are numerous, few efforts have curated and organized such into a digital collection.

METHODS



The need for an SR “toolbox” was identified by the Health Sciences Library at the John A. Burns School of Medicine, University of Hawai'i at Mānoa, which served 289 medical and 1298 health sciences students in the Fall 2019 semester. Patron needs related to performing health science SRs were identified through informal interviews and requests beginning 2016, while requests for SR tutorials from university departments extended back to 2015.



Patron-recommended content was sorted into eight sections aligned with SR process steps. Supplementary material to introduce, connect, and contextualize resources was written in July 2019. Additional material recommended by content experts was vetted and inserted accordingly.



Students and volunteers at the Health Sciences Library at the John A. Burns School of Medicine launched a systematic review toolbox on September 15, 2019, after three months of needs assessment, research, and development. The SR toolbox was deployed on a systemwide LibGuides content management system. Custom CSS and JS scripts modified page appearance, enhanced mobile-responsive design functionality, and connected pages to an analytics platform. Alma/Primo VE integration was verified for record linkages. Staff and volunteers were trained on usage and promoted the toolbox through the website and while teaching workshops during the 2019 and 2020 academic years.



All metrics were collected from LibGuides and Google Analytics dashboards, including usage (pages and sessions), duration (bounce rate and time), and utilization (source and device). LibGuides analytics recording began in September 2019 while Google Analytics was deployed in August 2020. Quantitative evaluation started in September 2020. No personally identifiable information was collected or analyzed. Informal, qualitative feedback solicitation started July 2020 and no analysis has been performed yet.

- Overview
- Guidelines & Rubrics
- Manuscript Development
- Databases & Indexes
- Reference Management
- Quality Assessment
- Data Extraction
- Data Analysis

EVALUATION QUESTIONS

- How is this toolbox being utilized?
- Does this meet patron needs?
- Which components are most useful?
- What can be improved further?

Figure 1: Systematic Review Toolbox “Stages”

CONCLUSIONS

A high demand for systematic review training in medical libraries led to the development of a digital “toolbox”. This collection included original written content coupled with expert-led video tutorials from various medical libraries, organized by process stages.

Customized LibGuides provided good content management and delivery of resources. Google Analytics provided useful statistics related to utilization and trends.

There was overwhelming use of the toolbox, with two sections viewed the most: Data Extraction and Quality Assessment. Underused section resources may be redundant and duplicated in other campuswide LibGuides.

This collection complemented workshop curricula as well as provided guidance asynchronously. Future interview and observational research into user navigation will uncover how users navigate among toolbox sections and which resources are being used.

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