

INVOLVING USERS TO SUCCESSFULLY MEET THE CHALLENGES OF THE DIGITAL LIBRARY: A 30 YEAR PERSONAL REFLECTION

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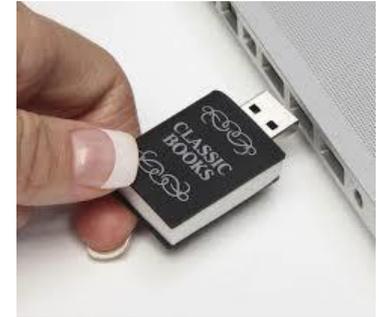
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Challenges of the digital library conference: FGV, Rio de Janeiro, Brazil, 19th – 20th August 2014

Contents of presentation

- Relevance of User Experience (UX) and Evidence Based Librarianship (EBL) for meeting challenges of digital library
- Personal experience in addressing the challenges of the digital library
- Examples of EBL and UX 1 in 1998, 2007, 2013 and August 2014
- Lessons learned: managing evaluation, collaboration, dissemination, pragmatism



Users Experience (UX) and the digital library



Every aspect of the user's interaction with a product, service, or company that make up the user's perceptions of the whole. (UX) design as a discipline is concerned with all the elements that together make up that interface, including layout, visual design, text, brand, sound, and interaction. (UX) works to coordinate these elements to allow for the best possible interaction by users. (Usability Book of knowledge, n.d.)

- UX must be integrated into all aspects of a library (Schmidt, 2011)
- No guarantee that the complex needs of digital library users may be the same as librarians perceive them to be
- Insight, understanding and awareness into users' behaviour needed so relevant services can be provided

WEAVE

Journal Of Library User Experience

Weave is an open-access, peer-reviewed journal for Library User Experience professionals published by Michigan Publishing.

Weave is a peer-reviewed, open access, web-based publication featuring articles on user experience design for librarians and professionals in related fields. Our editorial board consists of recognized experts in the field of library UX, and our editorial philosophy is to strive for a balance between theoretical and practical topics.

Our first issue will be out summer 2014.

Call for Papers

University Library

Loughborough
University

Evidence Based Librarianship (EBL) and the digital library

EBL “seeks to improve library practice by utilising the best available evidence in conjunction with a pragmatic perspective developed from working experiences in librarianship. The best available evidence might be produced from quantitative or qualitative research designs” Eldredge (2002)

- First stage is crucial – identifying focussed, relevant significant and answerable practice based question
- Second stage – searching for data / evidence to answer question
- Third stage – evaluating the evidence / data and coming up with the answer
- In survey of US directors of libraries (499 response) – those confident of strategy to meet the changing needs of users were those who gathered evidence and had other forms of assessment (Long & Schonfeld 2014)



Personal experience of UX and EBL and the challenges of the digital library: work as a library practitioner

Time and place of work	Level of digital library provision
1977: Librarian, Highland Health Science Library, Inverness, Scotland	None apart from terminal available over 250 km away where requests could be made for online searches

Time and place of work	Level of digital library provision
2014: Head of Planning and Resources Loughborough University Library, England	<ul style="list-style-type: none">• Providing over 37,000 e-journals• Library app• Access provided to over 150 databases• Over 200 pcs in Library• Online resource discovery tool• Library web pages, YouTube, Facebook, Tweet, blog used to communicate with users• Extensive digital literacy programmes• Institutional repository with over 12,000 full text items• Around 10,000 e-books

Between 1992 and 2014, 17 instances on capturing digital library UX (1- 5 between 1992 and 2005, 6 – 17 between 2006 and 2014)

Investigations into the digital library UX conducted by Graham Walton: 1998 - 2014

1998 How are UK academic staff and researchers using digital library services?

2007 Do academic staff just need access to e-journals?

2013 How are academics using digital library services?

2014 What bibliographical software do researchers prefer to use?

Personal experience of UX and EBL and the challenges of the digital library: IMPEL2 project

eLib: The Electronic Libraries Programme 1995-2001



- Was Co-Director of the IMPEL2 (Impact on People of Electronic Libraries). IMPEL2 as 1 of 50 projects that made up UK's electronic libraries (eLib) programme
- Overall focus was the human and organisational aspects of the digital library. Main intention was to be "basis for more informed decision-making and provide a clearer picture of the role of academic libraries..." (Edwards, Day & Walton, 1998)
- Included 5 separate projects including one which was one of first to explore the digital library users' experiences (Jackson, Bartle & Walton 1999)

Example 1: 1998: how do academic staff use digital resources?

- Purpose was to explore how university academics use electronic resources
- Data gathered from 55 semi-structured interviews, postal survey of 4000 UK academics across 17 universities and 11 subject areas with 1,340 responses (33.5% response rate)
- ‘Digital resources’ was interpreted as CD-ROMS, Internet, OPAC, BIDS (electronic databases) E journals and e-mail

(Jackson, M, Bartle, C and Walton, G 1999, ‘Effective use of electronic resources’, *Innovation in Education and Training International*, Vol. 36, No. 4, pp. 320- 327)

Frequency of use of digital information by academics in 1998

Table 1. *Total annual use of electronic information sources by % of academic staff*

	0 times	1-10 times	1-25 times	26-50 times	51-100 times	101-200 times	201-300 times	300+ times
CD-ROMs	15.1	37.2	18.1	12.4	8.4	4.6	1.7	2.4
Internet	9.4	16.8	13.8	14.3	13.9	14.4	6.7	10.6
OPAC	36.0	12.9	10.4	16.4	9.8	7.6	4.1	2.9
BIDS	39.1	24.1	16.4	10.2	5.5	3.2	0.6	0.9
Elec. journals	41.3	28.2	12.5	8.0	4.4	2.2	1.3	2.1
e-mail	6.0	4.1	2.7	3.2	6.0	10.4	14.4	54.2

- Use varies by type of resource
- Compared to 2014, small use of Internet
- 40% never used e-journals

Academics' access to networked computer for accessing digital resources in 1998

Table 4. *Access to a networked computer*

Access via	Frequency	Percentage
Desk-Top	1129	84.3
Shared Office	155	11.6
Home (via a Modem)	8	0.6
No Access	48	3.6

- 16% academics did not have access to a networked pc at work
- 4 % had no access at all to networked pc
- Less than 1% had modem access at home to networked pc

Whether academics refer to electronic information sources more than print resources

Table 2. *Use of electronic and paper-based resources (N = 1299)*

Subject	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
Economics	2.9	8.6	34.3	54.3	0
Business	3.3	12.0	56.0	27.0	1.7
Law	0	3.5	52.6	40.4	3.5
Engineering	2.0	13.2	63.5	19.8	1.5
Human/English	1.1	2.3	43.7	52.9	0
Soc. Science	5.3	1.8	45.6	42.1	5.3
Health Studies	2.5	15.2	57.8	23.8	0.8
Environ. Sc.	2.1	11.7	42.6	42.6	1.1
Cultural Stud.	0	2.9	62.9	31.4	2.9
Comp/Info. Sc.	4.3	34.6	34.8	26.1	0
Biological Sc.	2.8	36.1	36.1	25.0	0
Languages	0	0	54.5	45.5	0
Education	4.1	3.3	48.8	42.3	1.6

Variable depending on subject: e.g. computing strongly preferred electronic, humanities/ English strongly prefer paper

Example 2: 2007: do academic staff just need e-journals?

- Original study completed in 1998 – Woodward, H. et al (1998), Café Jus: an electronic journals user survey, *Journal of Digital Information*, Vol. 1 (3), 1998-09-18
<http://jodi.tamu.edu/Articles/v01/i03/>
- 1998 - 300 e-journals – risen to 7000 by 2007.
- On-line questionnaire was used to gather the e-journal data for this study covering five broad areas of use :

frequency of use, importance attached , barriers, individuals' location when accessing e-journals, training needs.

There were 225 completed responses (15% response rate)

Brown, J, Lund, P and Walton, G (2007), *Use of e-journals by academic staff and researchers at Loughborough University*. Loughborough University Library. Available from:

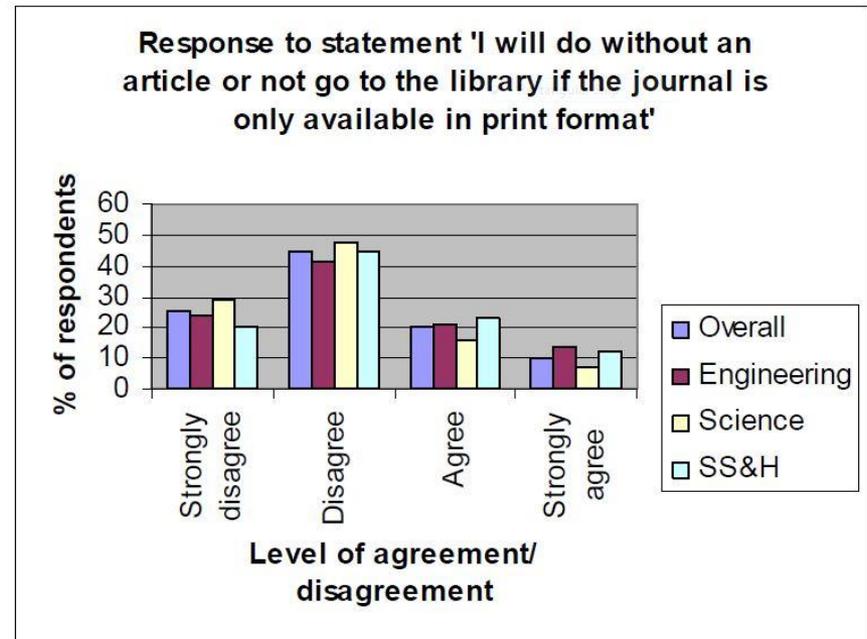
http://www.lboro.ac.uk/media/www.lboro.ac.uk/content/library/downloads/surveyresults/ejournal_survey.pdf

What did survey say about the academics e-journal UX?

84% viewing them either daily or weekly.

“E journals have transformed my life and I can only encourage even greater investment in a wider range of titles”

“Personally, I would happily have no print versions at all, if I could have more papers available on line



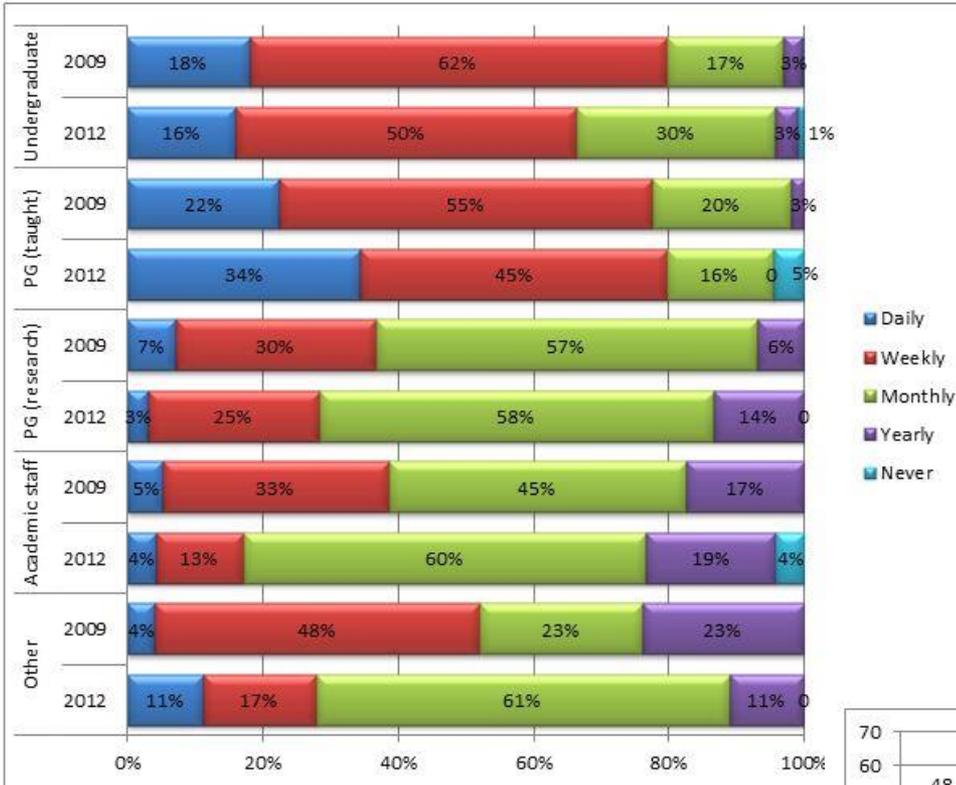
Example 4: 2014: how do academic staff use digital resources?

Interviews with 15 academic staff about how they use University's digital library services because in 2012 found that -

Academics' importance and satisfaction levels with digital library services:2012 compared with 2009

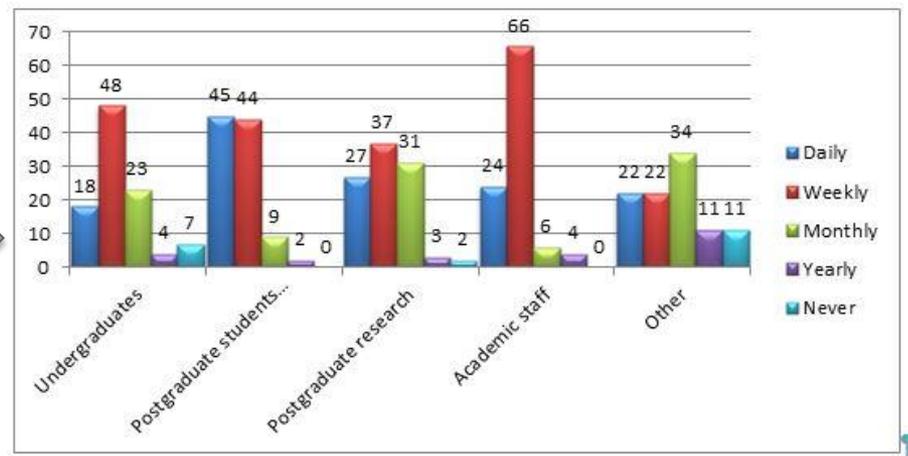
(ratings for 15 Library services)

		2012	2009
E-journals	importance levels	1st	3rd
	satisfaction levels	4th	6th
E-books	importance levels	6 th	10 th
	satisfaction levels	13 th	12 th
Databases	importance levels	8 th	6 th
	satisfaction levels	3 rd	2 nd
Resource discovery tool	importance levels	5 th	8 th
	satisfaction levels	15 th	7 th



Academic staff using Library less (i.e. 4% never visited Library in 2012)

24% academic staff use digital Library daily



Actions resulting from interviews

Resource discovery tool: introduced additional functionality including browse searching, improvements to the display of variant editions of works, the exporting of records to bibliographic management software, and improvements to navigation

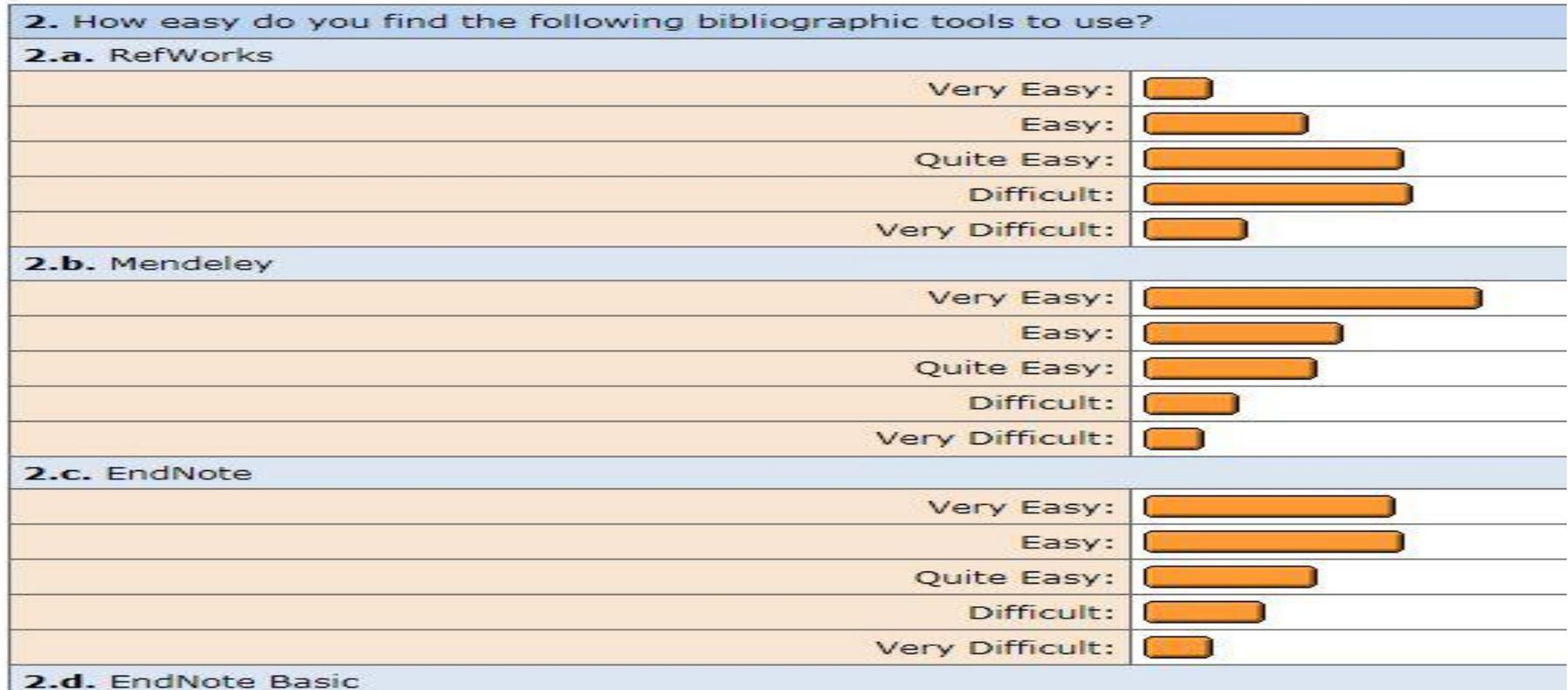
e-books: participated in a couple of national/international purchasing models projects, reviewed e-book suppliers and trialled new supplier

electronic databases reviewing the visibility of databases to promote usage and gave feedback to publishers on the structure and complexity of their interfaces.

Walton, G, Brewerton, G, Cunningham, M, Leahy, F and Parry, F 2014, *Exploring academics' changing use of Loughborough University Library's digital resources*. Loughborough University Library. Available from: [http://www.lboro.ac.uk/media/www.lboro.ac.uk/content/library/downloads/surveyresults/Academics'%20use%20of%20digital%20resources%20\(2014\).pdf](http://www.lboro.ac.uk/media/www.lboro.ac.uk/content/library/downloads/surveyresults/Academics'%20use%20of%20digital%20resources%20(2014).pdf)

Do researchers prefer RefWorks, Mendeley or EndNote?

(224 responses so far: data collection ends 31st August 2014)



Mendeley seems an easy and practical tool for my research area. I believe that the university would benefit from this service and they could provide more storage (different plan for mendeley) for the researchers bibliography.

Reflections on using the UX and EBL in meeting the challenges of the digital library

Managing the digital library UX evaluation



- Invest time and money into coming up with the right question and how to collect right data
- Make data collection ongoing so it is available when needed (*Just In Time* is not good enough)
- Have right skills in library workforce for data collection and analysis
- Need for project management with timescale and tasks identified
- Have process in place to translate findings into recommendations and then actions.
- Ensure progress on recommendations is monitored and eventual success levels evaluated

Reflections on using the UX and EBL in meeting the challenges of the digital library

Benefits of collaboration

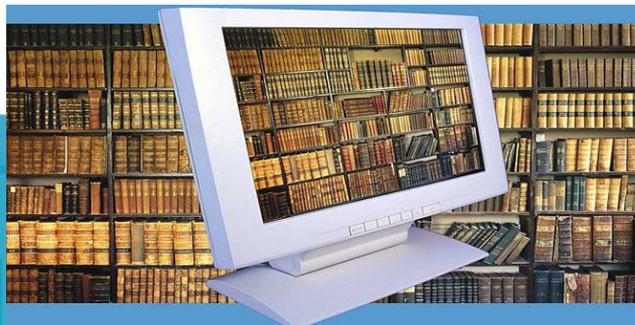
- Benchmarking comparisons can be completed with other digital library providers at regional, national and international levels
- Staff development opportunity is provided if a library team is set up to oversee the work.
- Partnerships with users themselves (such as students, researchers and academics) are ideal opportunities to capture the UX
- But...collaboration increases the complexity and also makes coming up with common approach challenging



Reflections on using the UX and EBL in meeting the challenges of the digital library

Importance of dissemination

- Need to have culture of dissemination otherwise EBL is very difficult
- Wider dissemination: time consuming and challenging vs. career development opportunities, skills acquisition and feelings of pride/achievement
- Social media is ideal for communicating key findings, outcomes and actions to the wider world
- But also need well-structured and presented report (with concise executive summary)
- Present their work at a suitable conference and also seek to publish in professional and/ or research journal.



Reflections on using the UX and EBL in meeting the challenges of the digital library

Importance of pragmatism

- Validity and reliability of the evidence used can be lead to major disagreements between practitioners and academic researchers
- But...delivering digital library services alone is time consuming, never mind thorough UX evaluations
- Unless dedicated funding, methods have to be chosen which are relatively quick to both administer and analyse
- Interviews and observation methodologies are effective but they are costly in both data collection and analysis
- Need effective approaches to gather both qualitative and quantitative data which are not labour intensive.

Conclusion

15 years ago, IMPEL2 study explored UX in digital libraries. Some things have changed since then:



In 1998, over 40% library users never accessed e-journals and only 50% regularly checked e-mails

Some things have not changed:

In 1998, peoples indicated that they were concerned with risk of plagiarism, the quality and quantity (too much) of information available, speed of access, commercialization of the Internet and inadequate searching techniques

The challenge for digital library providers is to know the user

“We must discover what our customers want and build on that rather than attempting to lead them to towards a future which they think is irrelevant” (Law 2010)

Acknowledgements

Slide 1: Digital library loans get government backing Guardian 23rd March 2013
<http://www.theguardian.com/books/2013/mar/28/government-backs-digital-library-loans>

Slide 2: USB digital library <http://thegadgetflow.com/portfolio/usb-digital-library-29/>

Slide 3: the future, whose to say where (and in what reality) we will search for our information? Photographer: HacksHaven
Photographer URL: <http://www.flickr.com/photos/hackshaven/with/4832309018/> Photo Source URL:
<http://www.flickr.com/photos/hackshaven/4832309018/> Permission: Creative Commons Attribution-NonCommercial-ShareAlike 2.0
Generic

Slide 4: Rooster GNN9th March 2014 Digital Repositories and the Fight to Make Research Accessible
<http://roostergnn.com/2014/03/09/digital-repositories-and-the-fight-to-make-research-accessible/15647/>

Slide 18:: Nation's first all-digital, bookless library opens in Texas 15th September 2013 <http://www.digitaltrends.com/cool-tech/bookless-all-digital-library-opens-in-texas/#ixzz38ILZcpNd>

Slide 19: E book E book reader http://www.kcetvnr.org/images/digital_library.jpg

Slide 20: Northeast India's first online digital library opened 29th June 2013 <http://post.jagran.com/Northeast-Indias-first-online-digital-library-opened-1372492059>

Slide 22: Welcome to SensusLibrary <http://www.sensuslibrary.com>