A website is essential when serving the public. A significant portion of your clients may not ever enter your building, or live in your neighborhood. Therefore, it is important that your website be:

• Accessible (devices and people);
  • Able to use on various devices, without too many issues; - desktop, tablets, phones
  • Run on all the modern browsers
  • People, vision-impaired, hearing-impaired can use without difficulty
  • Use of various navigation methods – mouse, keyboard, touch, e.g. fallback for hover
• Useful, be able to provide the required information quickly, better to be useful than trendy
• Engaging to capture their interest (there are millions of websites)
• Fast-loading
• Without errors
• Don’t ask the user to think too much of its intent, list your intent rather than ‘click here’
• Easy to navigate;
  • “map is useless without a legend, a website is useless without clear
There are different types of websites, business, educational, personal, blog. These websites all created using HTML or open source software.

**Open source** - denoting software for which the original source code is made freely available and may be redistributed and modified. – Google

**Why Open Source?**

- Free
- Highly customizable
- Large community of developers (where else can you get answers to your questions at a local meetup for free)
- Quicker to add new features into it, without having to wait for next version

Overview of our websites:
1. Health Sciences Library
   - http://hslibrary.ucdenver.edu
   - Self hosted, LAMP server (Linux/Ubuntu, Apache, MySQL, PHP)
   - CMS – Drupal 7
   - < 100 pages
Library conducted research on open source Content Management Systems (CMS) Drupal, Joomla and WordPress in 2011 and the Library migrated its static/PHP webpages to Drupal 7 in 2012

**Why Drupal?**

Choose Drupal mainly based on:

- flexibility, more finely customized, through views, blocks and its Content Construction Kit (CCK), even the ability to customize contributed modules
- number of available modules, in most cases – there is a module for that,
- Regular updates to handle security issues, bugs and new features,
- A vibrant community, with over 2500 volunteers working on Drupal 8,
- Sound architecture, with distinction between nodes, views, blocks, etc.
- Very scalable, from low traffic, to super high traffic (Oscars)
Websites are never static, there are always redesigns (at least every 3 years) to incorporate new features, improvements, etc.

The Library is hoping to migrate to Drupal 8 along with a major redesign incorporating responsive design and other features by the end of 2015 and currently testing Drupal 8 beta versions. The library is also hoping to contribute to a Drupal module this year.

**New features in Drupal 8:**

- Mobile/Responsive in its DNA
- Better configuration management
- Accessibility integration
- Better user experience
- Easy authoring
- HTML5 incorporated
- Built in web services
- Field power

With our migration to Drupal 8, meet AA accessibility standards in:

- Color
Keep your website, fresh and engaging.
Librarians are said to like to write a lot, and many pages on our website are text heavy. We need to note that readers are of three main types:

- **“The Reader”**: an individual that reads every line
- **The Scanner**: an individual who “scans” or “skims” through your content to find the interesting bits
- **The Bottom Feeder**: an individual who reads the first few sentences and then cuts to the summary paragraphs” - http://www.sitepoint.com/tricks-images-make-users-feel-think/

Most readers are scanners.

However, the days when pictures were used sparingly because of size and bandwidth issues for the most part are behind us with libraries/modules such as Modernizr and Picture. Create impactful images - http://www.sitepoint.com/tricks-images-make-users-feel-think/

There are a vast array of Drupal modules that can be used to spic up your website such as:
A new feature that falls under usefulness is the **Bento box**.

Currently our website has 6 tabs/areas where users can filter the search, with a Bento box there will be one tab/box that the user will use and then the result page will be separated into 6 areas that the user can make their selection from. This way the user only enters the search term once and get results in the different categories instead of going back to the search box multiple times and entering the search code.

Example of use: Duke University – created a Bento box and uploaded the code to Github. - https://github.com/duke-libraries/drupal-dul-bento
The Library is currently modifying this code.
User Interactivity – responsive to the user, not in the way, Google collects your data and piles with ads based on your search patterns, but what the user is interested in.

Interactive and useful:
We will be having a library staff submit their IT wishes to the IT Department. On submission, all wishes can be seen publicly (all staff) at real time without having for separate collation of form data at a later date, while still being anonymous.
Website is not responsive on desktop, but what we call mobile optimized –, but no zooming or pinching and fully functional on the mobile or tablet

- Same URL in use, no change in URL, no m/, no redirect to other pages, changing links etc.
- Navigation – from megamenu to accordion/drop down button
- Different theme, one for desktop and one for mobile, but with same color scheme making it seamless to user.
- Editors make or modify content once.
- Same information, different rendering
  1. On pages with lots of content use accordion blocks
  2. With tables greater than 3 columns use dl lists
- E.g., hours page, database page

Pros and Cons of Responsive design compared to mobile optimized with two themes
With two themes:

- Have two different CSS files to update
- When working with panel pages (two or more columns) have to set up the configuration
- On pages with blocks and views, have to set up the configuration
Some of the stated drawbacks to responsive web design are:

- Navigation,
- Images,
- Tables
- Lots of text

Our solution are:

- Navigation: use of the hamburger icon with drop downs, that do not use the hover effect
- Images: Modernizer and the Picture module (still in implementation phase), in some cases, not showing the image
- For tables with 3 or more columns, the use of definition list(<dl>). This allows the user to scroll through the content vertically without breaking the layout or having to zoom in to see the content
- Lots of text: accordions
Mobile app vs mobile website.
Which one is best for your organization? Should you have one or both?

**Major difference:**
- A mobile website opens up in a browser and needs an internet connection to use
- A mobile device is downloaded from a device specific portal, iTunes, Google Play, etc, it may pull content from the internet, store such content onto the phone’s storage and do not require to access a internet connection to use

**Which one is best for your organization depends on:**
- Target audience
- Available budget
- Intended purpose
- Required features

Accessibility has come of age, while we work on making our websites fit on any size device, we must also look into making our websites as accessible as ever to meet all our clientele. See: - http://www.sitepoint.com/why-make-websites-accessible/

With our migration to Drupal 8, meet AA accessibility standards in :

- Color
- Contrast
- Keyboard
- Other input devices
- Images
- Videos - captioning
- For visible impaired – use of screen reader
- Data entry
- Navigation techniques
- Language
Test websites are critical when having a production website. Currently have 5 test servers:

1. To test new programming custom modules
2. To test updates to contributed modules already installed or new modules to be installed
3. Testing new advanced features modules from the Spark (Drupal) distro
4. Drupal 8 testing
5. Usability

Reasons for having a test server:

• Can do module updates to ensure that there are no adverse interactions before updating the live website
• Can test new/different features
• Can do usability/accessibility testing away from the live site
• Can test updated versions of the software/CMS
USABILITY TESTING

Test early. Test often.

We first do testing with our Web Working Group, then our staff, and then with users.

These are buttons that we’ve posted on our site to solicit users.

Testing isn’t about being perfect.
It’s about doing it.
Make testing routine, not special.
USABILITY TESTING

We've done live on-the-ground testing at lunchtime.
We’ve gone out on campus with an iPad and laptop in hand

We then asked users to test and rate a new feature on our homepage.

We had 11 participants.
And as a thank you, we gave them a library bag and some candy.
USABILITY TESTING: Card sorts

We’ve done formal card-sorts using a free tool called Xsort.

It’s mac-based for desktops and laptops. It is not live online testing.

It looks like solitaire where the user drags and drops the cards into piles.

Users commented that it was fun and easy to use, that it was “like a matching game”, and that it felt “like a video game”

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Full report: CardSortReport-CombinedStaffUser-2014May

Xsort
Provides statistical results and you can export the reports
You can have where you set the categories and they are closed or open and you let
USABILITY TESTING: Mega-menu

We used the results of the card sorts to inform our new mega-menu. Our original menu did not have any subcategories. Our goal was to categorize our navigation that helped users find items more easily and more intuitively.

The year-long process began in late 2013 with a staff card sort, followed by a user card sort in early 2014, and then a thorough card sort analysis that informed the foundation of the terms and categories.

We use a Drupal module called TB Mega Menu http://www.drupal.org/project/tb_megamenu by ThemeBrain http://www.themebrain.com
USABILITY TESTING: Mega-menu testing form

We did online testing on the mega-menu. We used a Drupal form and had 14 participants who found the mega-menu to be “Very helpful” or “Extremely helpful.”

We also conducted live one-on-one testing to get additional feedback.

We continue to improve the design based on feedback from staff and users.

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CREATING MOCKUPS

Moqups is an online tool for creating wireframes, mockups and prototypes.

It’s drag & drop functions make it very quick and easy for non-programmers to use.

You just upload a screenshot of your webpage
Then you drag and drop objects right on top of it
Including buttons, headings, and text

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See it in action here in this example of when we presented to the staff that we were going to adopt the new campus website’s colors: https://moqups.com/hslibraryit/nosgVQQf/p:afe430fd9
View the QuickTutorial at https://moqups.com

Moqups, An easy way to create and share mockups online without having to know code
Presented at Quint 2014 MCMLA Meeting
WISHES

If you could have three library wishes, what would they be?

We’ve done our annual Library Wishes campaign for two years now. In 2014, we had over 150 responses and almost 350 wishes!

We use a Drupal form and tag cloud module for the Wishes

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https://hslibrary.ucdenver.edu/library-wishes-2014

We post a button on all of our web pages
The button links to a Drupal form.
The form feeds the above table of submissions and responses
We tag the submissions, which feeds the tag cloud.
GUIDE ON THE SIDE

Guide on the Side is an open source tool for creating interactive web tutorials

On the right side, you can present any webpage (that can be framed, which is most) On the left side is where you build your tutorial with your instructions The tutorials use a WYSIWYG and are quick and easy to create for non-programmers

You can use GoTS for either usability testing or any interactive exercise where you ask users to go to a website and do something, whether it’s to test a feature or try out a database or teach them how to use the search function.

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Award-winning (national awards) and open source tool for creating interactive web tutorials
Thank You!

CLiC Rocks!