Hennepin County Law Library

Heuristic Evaluation

Sarah Gleason
Student in WRIT 4501: Usability and Human Factors in Technical Communication

10/7/2022

Introduction

A heuristic evaluation is an informal method to **assess a product or service against recognized usability principles**. *Heuristics* refer to [Jakob Nielsen's 10 general principles for interaction design.](#) They are called "heuristics" because they are broad rules of thumb and not specific usability guidelines.

Definition

Heuristic | hyoo‾ˈristik | Adjective. Enabling a person to discover or learn something for themselves: *a "hands-on" or interactive heuristic approach to learning*.

Description of the Product Type

Library websites are "digital hubs that instantly connect patrons to all (the) library has to offer; online resources, upcoming programs, museum passes, galleries, staff blogs, and book lists are just some of the types of content" that library sites have to offer. There are many different types of library sites that address the needs of different users. The product that will be evaluated is a public law library site. Law libraries are often open to public use. The library helps the public get access to legal materials; "such as books, journals, and electronic databases related to law." The product is also used by attorneys and legal professionals, who are better versed in finding the resources that they're looking for. There is a vast amount of information that goes into a law library site, therefore it needs to be easy to search for keywords to find relevant information. The target users will expect the site to be easy and quick to navigate. Novice users will expect to be able to find what they need without knowing legal jargon. Experienced users will expect to find the exact documents & reference material they need without much hassle. The law library can help public users find information such as; what forms they need to file a divorce, what they need to fight a parking ticket, or even information on what the FBI can and can't do. The law library can help lawyers, judges, court employees, and law librarians find information such as; how to get continuing legal education credits, specific articles that can be used in court, and getting necessary textbooks for studying.

Evaluation Methods

The product being evaluated is the Hennepin County Law Library site. Link: https://www.hclawlib.org/

This heuristic evaluation contains the following elements:

1. A paragraph devoted to the product according to each heuristic
2. At least one visual reference about the product regarding each heuristic.
3. A rating from 1–4 regarding the effectiveness of the product according to each heuristic (1—very ineffective; 2—ineffective; 3—effective; 4—very effective)
4. A conclusion with a summary of the complete evaluation and your overall ratings

The initial assessment appears in the Appendix of the heuristic evaluation.

Heuristic 1: Visibility of System Status

Why does this heuristic matter?

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time. The Nielsen-Norman group has a full article about [visibility of system status](#).

Law library sites must have correct and up to date information about how to contact them, their in person hours, where they're located, and the dates and times of events and classes they host. A site for a law library will more often than not have a connection to a physical library itself. The connection between the site and the in-person location must be clear and up to date. If there is a change in the library hours or the times of events, it must be clear to the user in multiple ways. Users must be able to understand "whether an interaction was successful." If they hover over a clickable link, there must be visual feedback that the link is able to be clicked. If the user is unsure of what they can and cannot click they will not be able to navigate to the information they need to find. The law library must also show what content they have available, and what content is out of stock. If there is a book that isn't available for the user to access the website must make that known so that the user can know what steps they must take next. Communicating the status of information in the law library, without the user needing to contact a person to understand it, creates trust. Trust is especially important with law libraries because their materials are being used for things such as jobs, and resolving monetary disputes.

Example: *When the time of a continuing legal education event gets changed, the library has the original hours crossed out and the new updated time highlighted in red. The site also sends out an email announcement as soon as they know they have to change the event time, that details the new time and why it had to be moved.*

Assessment of Hennepin County Law Library

Feedback is overall good, allowing for quick and easy navigation. Buttons, links, search bars, and more use microinteractions to invite interaction. In some cases there is no feedback that the user is unable to carry out certain functions, which can cause user error.

Product Rating: 2.5- somewhat effective

Heuristic 2: Match between System and the Real World

Why does this heuristic matter?

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order. The Nielsen-Norman group has a full article on the [match between the system and the real world](#).

Especially with law libraries, which most of the time allows access to public users, the novice users must understand how to find the information that they need. Experienced users, such as attorneys and judges, also need to be able to search for keywords that include technical law language and terminology because they are usually looking for very specific materials. Headers should make sense to both novice and expert users. "UI elements which reflect material objects (must) be similar to those objects from the real world". If the law library decides to use iconography to represent headings instead of words it must match the mental model the user has created for that heading. The information on the page must also be ordered in a way that makes sense to the user. If there is a notification about a piece of literature that is no longer available, it should be in the same location of the literature. If it was on the homepage instead, the information may be skipped by the user who needs to find it.

Example: *When a public user of a law library is looking for the paperwork they need to file a divorce, they should be able to use keywords like "divorce papers" to find the information they need with no knowledge of what the form is actually called.*

Assessment of Hennepin County Law Library

Plain language is used in most areas of the site, helping support novice users' interactions with the site. The main menu uses expert jargon as one of its headings which can confuse novice users. The site uses familiar icons to represent the opening and closing of drop down menus and other navigation options. Drop down menus are not organized in a way that can be immediately understood by the user.

Product Rating: 2- ineffective

Heuristic 3 :User Control And Freedom

Why does this heuristic matter?

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo. The Nielsen-Norman group has a full article on the importance of [user control and freedom](#).

Law library sites must have an easy way to get back to the homepage, or off the site completely. If the user navigates to a resource, they must be able to quickly navigate back to the search tool they used to find the resource. If the user is unable to get off of a page they are going to be angered or frustrated, and may believe the site is broken. If they hit a back button and it brings them too far back, and now they can't find the page they were on previously, they might assume the website is less usable and will take preventive actions next time they use it to avoid losing the content they searched. Links that help the user exit from the content must be easy to find, and easily recognized by users. If a user is looking to rent resources from the library, and they begin that process, they must also be able to quickly cancel their rental if they decide that they no longer want that resource anymore. If the user cannot undo a rental they will have to call to figure out how to cancel that, which causes more time spent on the task they're trying to get done.

Example: *A public user searches for legal resources because they are looking to find an attorney, They then decide they actually want to represent themselves so they are looking to get back to the search function to find how they can do that. They notice links at the top of the page that create breadcrumbs to get back to the search function. They click on the "search" breadcrumb and are brought back to that function.*

Assessment of Hennepin County Law Library

Users are able to efficiently navigate back steps in the site. Breadcrumbs are left on most pages to allow the user to go back to where they were previously. Links to the homepage are included on every page. When users add items to their cart, they can quickly remove them by pressing the "remove" button directly next to where they added the item.

Product Rating: 4- very effective

Heuristic 4: Consistency and Standards

Why does this heuristic matter?

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow [platform conventions](#). The Nielsen-Norman group has a full article on the importance of [consistency and standards](#).

Law library sites "should use the same patterns everywhere inside the system" to keep the site consistent. Consistency helps the user understand how the site works after only a short time of usage. Consistency can be seen in the repetition of color, icons, location of information, page layout, and more. If the design system is not consistent throughout the website, the user will not be able to understand how to navigate the site. Design conventions must also be consistent with that of other websites that exist. The navigation bar should never be in the middle of the page because that would interfere with what users know about the locations of navigation bars across different websites. Putting a navigation bar in an unrecognized place would cause confusion and an interruption in finishing a task. This ideology needs to be applied across all designed aspects of the site to reduce confusion.

Example: *On each page of a law library website, the contact information and location of the library can be found in the upper right corner below the headings.*

Assessment of Hennepin County Law Library

The site has consistent functionality across all of its interactive elements. It uses color to help users understand what elements are interactive and to keep the consistency of the site. Homepages and contact information are stored in familiar places to the user. The layout of the online research page is not as conducive to finding the information the user needs, as the search functions are small and hidden on the left side of the page.

Product Rating: 3- effective

Heuristic 5: Error Prevention

Why does this heuristic matter?

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action. The Nielsen-Norman Group has a full article on [preventing user errors](#)*.*

If a user has access to interactive elements that can cause detrimental errors, then the user will be much less likely to use the website. Avoiding slips and errors in the design of a law library site will help the user trust the online system which will most likely translate to the physical library's system as well. Errors can be avoided by making constraints a part of the site's design. Users should be able to type in keywords and have options recommended to them that are similar & relevant to those keywords to help increase efficiency. Any forms that require user input should not be able to be submitted until all of the required information is entered in. It should also signify to the user what information is necessary to fill in so they don't make the error of trying to submit before the form is fully and appropriately filled out.

Example: *A lawyer is looking to find a specific text to reference in a court proceeding. They start to search up the name of the text but forget the full name of it. Luckily, in the search bar the menu drops down giving them a list of all the possible texts that start with what they typed in.*

Assessment of Hennepin County Law Library

There are not many preventative measures put in place on the law libraries site. The site does not offer suggestions for users once they start typing. The common user can get confused on which search navigation tool they should be using to find the relevant information to them.

Product Rating: 1- very ineffective

Heuristic 6: Recognition Rather than Recall

Why does this heuristic matter?

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate. The Nielsen-Norman group has a full article on [recognition vs. recall in UX](#)*.*

Law libraries want to make their "content and interface easy to remember". It's already a daunting enough task to try to find something on a law library site as a public user. Because of this, public users will be strayed away from using the site if they are continually intimated by the content not being portrayed as user friendly to a novice user. Both user groups should be able to find things they've searched for in the past in a "history" search engine function. The site is less intimidating when the user knows they were able to use it successfully before, and they remember how and what they used it for. It is also important that the library doesn't assume the user will understand how to correctly interact with it. If there is any functionality on the site that requires a learning curve, or it has an icon that the user can't immediately relate to its function, the site must give tips on how to use the functionality and what that icon is representative of. If the site doesn't include any tips, the user will not know how to proceed in navigation.

Example: *A law library has a function on their site where the user is able to pin articles, texts, and other resources that they use often, or that they are interested in using in the future. When the user leaves the site, they don't remember what they searched for. But, once they login to the library and go to the search function, their pinned texts show up at the top of the page. This reminds them that they had content they wanted to check out.*

Assessment of Hennepin County Law Library

The user is able to access search history and cart history on the Catalog. This is not available to users using other search engines on the site, which can cause confusion. The interface is easy to remember because menu options are straightforward. However, the user could have a hard time remembering what search engine they should use to find the resources they need.

Product Rating: 2.5- somewhat effective

Heuristic 7: Flexibility and Efficiency of Use

Why does this heuristic matter?

Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions. The Nielsen-Norman Group has a full article about [flexibility and efficiency of use](.).

This heuristic is especially important for law libraries. Because public law libraries have two user sets that have vastly different levels of expertise, they must make their system flexible and efficient for both their novice and experienced users. Any advanced functions of the site must not deter novice users from navigation. Two ways that can help expert users navigate faster is customization and personalization. Those two individual approaches are not the best suited for a law library, which has a rather rigid structure and layout. In the case of law libraries, customization and personalization may take too much effort and cost and will most likely not end up being used by the expert user. Giving the users more than one way to complete a task helps make the product more flexible and efficient. Instead of the user only having the option to type in the resource they are hoping to find, giving the user subject categories and listing specific databases can help the expert user navigate quicker.

Example: *A law library has a search engine that helps users find e-resources. For a novice user, the search engine function is available, in which they are able to type in a keyword to find what resources match what they're looking for. For expert users who are looking to find more specific information, there are checkboxes that allow them to search for a specific kind of resource. They can also cut down their search by browsing by subject or database.*

Assessment of Hennepin County Law Library

Some search engine features slow the user down by making them parse through information instead of pulling up what they searched. The catalog has an option for expert users to use an advanced search engine which can help them specify more information to narrow down content.

Product Rating: 2.5- somewhat effective

Heuristic 8: Aesthetic and Minimalist Design

Why does this heuristic matter?

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility. The Nielsen-Norman Group has a full article about [aesthetic and minimalist design](#)*.*

Law library sites must not have too much noise in their design or else the user will get lost while trying to find information. The design must "seek to simplify interfaces by removing unnecessary elements or content that does not support user tasks". The design of the site must balance elements that create utility and help with usability, while also not having too many elements that deter users from finding the ones that help them efficiently and effectively use the site. Law libraries must effectively use images that represent who they are, that are high resolution, and that are compelling to the user. Headers must use plain language so that they are usable to all types of users accessing the site. Not all functionalities of the site have to be available for use at once. Law libraries must know their user base well, and be able to use visuals and design styles that speak to them.

Example: *The headers on a law library site are in clear plain language which makes it easy for novice and expert users to navigate the site. The colors are consistent throughout the site, but are not overused. The site utilizes color, graphics, and white space to allow the user to efficiently find what they're looking for without getting distracted.*

Assessment of Hennepin County Law Library

The design is not noisy and achieves a minimalistic style. The site is not as aesthetically pleasing as it could be, with too large of menus and grainy images. There is too much white space in some places, which makes it harder for the user to find the functions they are looking for.

Product Rating: 2- ineffective

Heuristic 9: Help Users Recognize, Diagnose, and Recover from Errors

Why does this heuristic matter?

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution. The Nielsen-Norman Group has a full article about error message guidelines*.*

Law libraries must have error messages for when the user makes a mistake or slips. Error messages are an important way to inform the user that they did not complete a task correctly, and to help guide them to the correct completion. The error messages must be understandable for the user so that they don't have to do something outside the site to figure out what the problem could be. If the user selects to rent something that is no longer available, they must know immediately. They also must understand why the resource is not available, and when it might be available in the near future. If they aren't explicitly told that information, they will most likely seek it in another way. This causes unnecessary calls and questions to the staff of the library, taking their time away from helping those with more pressing needs.

Example: *When filling out a form to ask for a librarian's help, the user misses a section that was required for submitting the form. The user is given an immediate red error message that says "This field is a required field". This helps the user understand they must finish filling out the red highlighted fields before they are allowed to submit their request.*

Assessment of Hennepin County Law Library

There are some aspects that do a great job of helping users recover from errors like the "Ask a librarian" form. It has direct error messages that highlight in red that help guide the user to the correct way to fill out the form. The catalog does a bad job with error messages, especially when pertaining to the status of availability of their content. Nothing notifies the user if they've typed something incorrectly into any search bar.

Product Rating: 2.5- somewhat effective

Heuristic 10: Help and Documentation

Why does this heuristic matter?

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large. The Nielsen-Norman Group has a full article about [help and documentation](#).

Help and documentation can be a useful tool to give users access to more information if they're having trouble navigating any parts of the site. In terms of law libraries, pull revelations are more useful than push revelations. Most users don't need a tutorial of how to use search engines, and how to navigate through basic lots of information. However, if a user is attempting to complete a more specific task or search function, tooltips might be useful for helping them figure out how to get to the information in the most efficient way possible. These types of proactive help must be relevant to the most common use cases. Reactive help is more important than proactive help on law library sites, and is what is more commonly used. This includes FAQ's, technical documentation, training modules, and more. Search capabilities must include searching for immediate help. Some law libraries will use an "Ask a law librarian" function to help answer any and all questions the user may have. The only issue with this form of help is that it is not immediate and the user will most likely need to wait for an email as a response to their question. On a positive note, they can ask more specific questions that may help them better navigate the site the next time they use it.

Example: *A user is trying to find out what the abbreviation CLE stands for, and why it is relevant to the law library. They navigate to the help section at the top left of the page to see if they can find out more information. They discover a FAQ header and click on it. One of the first questions answered on the FAQ is about CLE's, which they find to mean Continuing Legal Education.*

**Assessment of Hennepin County Law Library**

There is little to no documentation or help included on the site. The about page includes some helpful information about the in person library, but nothing about the site or its functions and capabilities. The "Ask a librarian" form is the closest the user will get to immediate help.

Product Rating: 1- very ineffective

Appendix A: Heuristic Evaluation of Hennepin County Law Library

Visibility of System Status

In terms of feedback the website does a good job helping the user understand which elements are interactive. The users know to click on certain links because when they hover over them the text becomes underlined. They understand what they are able to click on the navigation bar because when they hover the blocks turn to a darker blue inviting interaction, with the exception of the "Hennepin County Law Library" header which when clicked brings the user to the homepage. Drop down menus turn from gray to blue to show the user they can interact, and when the user clicks on the block the color remains blue and the plus sign next to the text turns to a minus sign. These microinteractions let the user know they have actively opened a drop down menu, and also that they have the option to close it if they please. One poor example of this heuristic within the site can be found in their catalog. The catalog allows the user to search for resources and texts so they can add them to their shopping cart. However, the resources available for rent can be added to the users cart even when they are not available. The reason the user would probably misunderstand its status of availability is because the text detailing that is located in small text and is not reinforced by the user still being able to add the item to their cart.
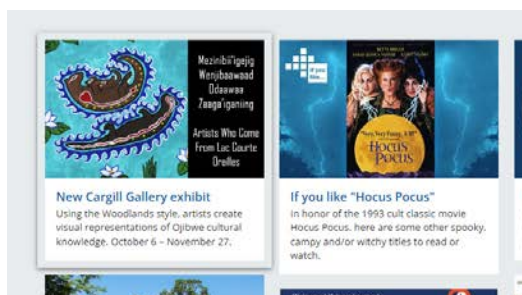
Figure 1: Announcements on the page show strong visibility of system status by highlighting what the user hovers over with a gray box and shadow

My Rating: 2.5 - somewhat effective

Match between System and the Real World

The Hennepin County Law library site does a moderately good job of using plain language. Most of their headers, subheaders, and body text use plain language. There are some gaps when it comes to terminology, but that can be explained by understanding that law is a difficult subject to explain in layman's terms. There will be a natural gap in what the novice user and expert user can understand on the site. This usually doesn't deter the public user from using the site, because they understand the difficulty of comprehending information about laws. There are some glaring headers where plain language can be added to help support both sets of users. For example in the navigation bar, one of the headers is abbreviated to be "CLE". A novice or expert user might not understand what that abbreviation stands for until they click on it and are brought to that page on the site. Even on the page the heading is still abbreviated, so the user cannot understand what it stands for until they read the body of text under it. In terms of familiarity, drop down menus use plus signs to indicate there is more information to be found, and minus signs to close the content. Also, the "Online research" heading has a downward facing carrot to indicate that more

information can be found underneath it once it's been clicked. There are some inconsistencies with how the drop down menus are organized on the site. There doesn't seem to be a patterned order to the drop down menus. Some are organized by alphabetization, some are ordered by what the designer believed to be the natural order of operations. Most users would be unable to find a pattern while navigating, bringing down the learnability of the site.
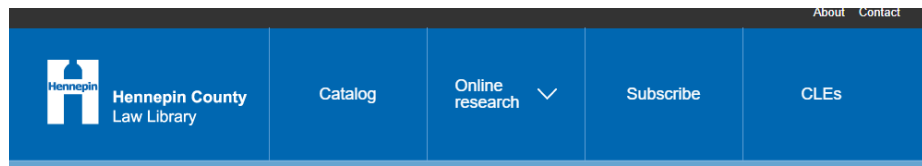
Figure 2: The abbreviation of "CLE" in the navigation bar is an ineffective example of a match between system and the real world

My Rating: 2- ineffective

User Control and Freedom

The law libraries site does a really good job at allowing the user to go back steps while navigating their site. On every page, and even in new tabs that are opened from clicking links the user is able to fairly efficiently navigate back to the homepage, or the step they were at before they got to the page they were on. As the user dives deeper into the pages on the site, the site leaves breadcrumbs at the top of each page that can help them go back a step. Like in the example seen in Figure 3. When users open drop down menus a link appears above them that says "Close all", so that they know they can reduce the amount of information they are seeing at any time. In the catalog, when they add something to their cart, a "(remove)" button appears right beside where they just clicked "add". This allows for quicker cancellation of rentals and builds the users trust with the site.


Figure 3: The breadcrumbs at the top of the pages are a strong example of user control and freedom because it allows the users to more easily navigate through the site

My Rating: 4- very effective

Consistency and Standards

The law libraries site is easy to navigate and use because it has consistency in its design. Links, buttons, search bars, & drop down menus all have consistent functions as detailed in the Visibility of System Status section. The blue color is used in different opacities to highlight clickable links or to show the user that buttons can be interacted with. External consistency is evident as well, the link to get to the homepage is located in the upper lefthand corner and can be navigated to by clicking on their logo. This is consistent with the most well known websites that users commonly interact with. When opening their Catalog, it strays a little bit away from common practices by putting the shopping cart up in the upper left corner instead of the right. However, it still is at the very top of the webpage and relatively easy to find. When the user

navigates to the "Online research" menu option, they might find that the layout of the page is not conducive to finding online research, which is supposed to be the function of that page. Instead there is a huge picture and a very small search bar on the far left hand side of the page that is supposed to be used for finding the necessary information. This is inconsistent with what users understand about where to find search bars from other sites. A good example of consistency can be found in Figures 4 and 5. When the users navigate to different pages from the menu bar, the contact information can be found in the same place on the page.
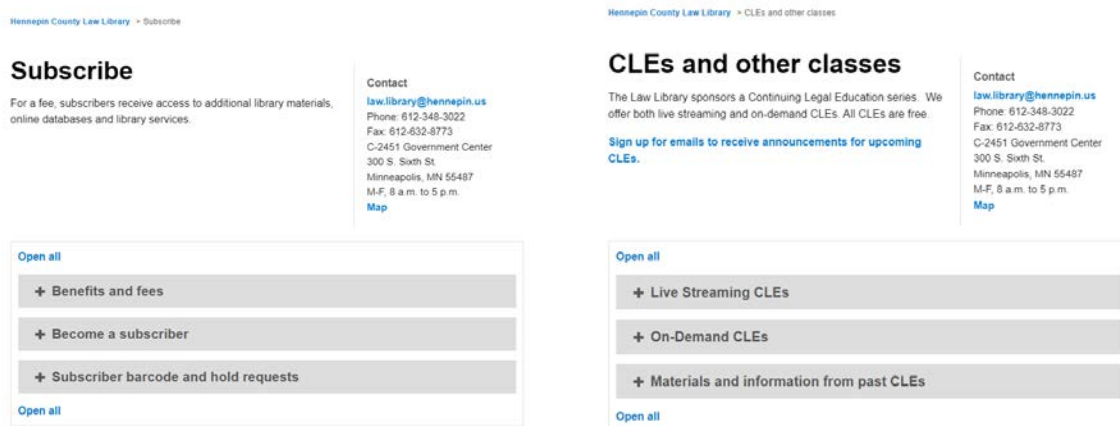
Figure 4 & 5: The contact information for the website being located in the same location on different pages of the site is a very effective example of consistency and standards

My Rating: 3- effective

Error Prevention

The Hennepin County Law Library site does not have many preventative measures in place, which can cause users to slip while they use the site. There isn't much room for the user to make catastrophic mistakes on the site, however, they can make mistakes when trying to rent something from the Catalog. The library does not offer suggestions in any of the search bars when the user begins typing, as can be seen in Figure 6.. This makes it difficult for the user to find what they are looking for without making an error first. Since there are various different search functions, this can also make it difficult for the user to know which search database they should be using to find the information they need. If they use the general search option on the homepage, they won't find many options that pertain to what they are looking for because it doesn't hold many resources, books, articles, etc. Also, if they type something incorrectly into any of the search bars, the search results will come up with nothing or it won't correct or give suggestions to correct their misspelling. This can cause users to find wrong information or come up with nothing at all, all which may lead them to seek help off of the site.
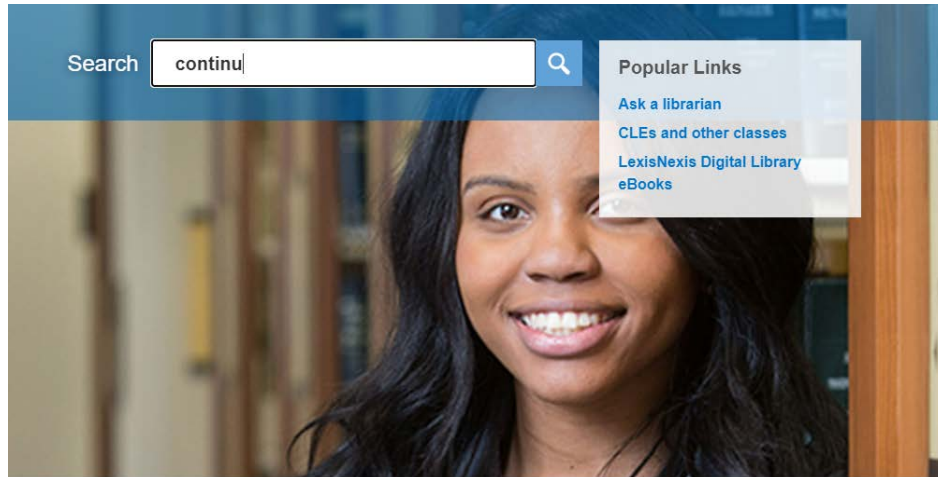
Figure 6: The search bar feature on the homepage is an ineffective example of error prevention because it doesn't suggest anything when a user begins typing

My Rating: 1- very ineffective

Recognition Rather than Recall

The law library does a good job of igniting user recognition on their Catalog page. Users are able to access their past search histories from as far back as first usage. They can also see what items they had in their cart if they added any in the past and didn't finish checking out. The search history option is not a feature on the law libraries homepage or online research search function. The interface is easy to remember because there are not many menu options to choose from, and the menu options are very straightforward. Although, the user can have a hard time recognizing what search function they should be using for their intended task because there is no function on the site to remind them of how they found what they needed previously.
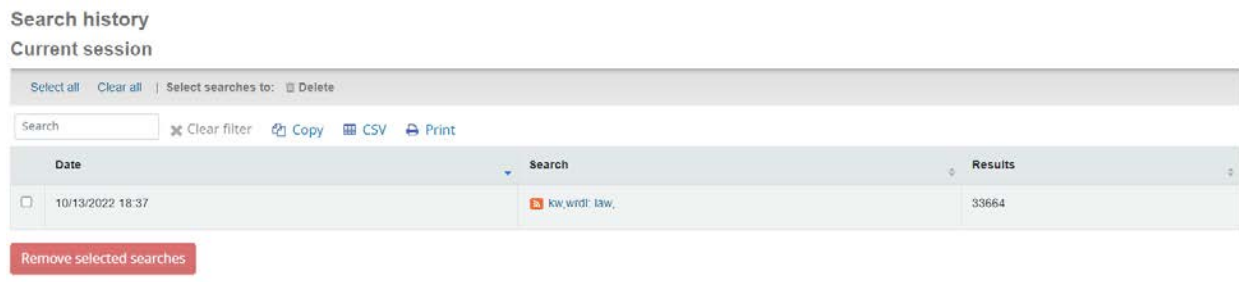
Figure 7: After using the search bar in the catalog the catalog saves your search history and what items you added to your cart. This is a strong example of recognition rather than recall.

My Rating: 2.5 somewhat effective

Flexibility and Efficiency of Use

The site has accelerator options for expert users to engage with to be able to achieve efficiency. Professional users have more database options to choose from when searching for content. They don't have to use the catalog to try to find what they are looking for. The public users have less options but usually aren't trying to find as specific of information as the expert users are. Something that can be frustrating for an expert user is that when they are looking to find information on specific statues, cases, and opinions, they must scroll through a drop down menu with all the information to try to find what they are looking for instead of being able to type in a specific statue, case, or opinion and have that pop up. Even if they type in a specific statue, they will be pushed to the pages with the drop down menus and they will have to scroll to try to find the one they need. They are also not in any specific order which can cost an expert user or a novice user a lot of time. In the Catalog, the expert user is given better accelerators that don't slow down the novice user. They are able to access a separate "Advanced search" bar that allows them to add more specificity to their search so they can limit their results. This is good for a professional who, for example, is trying to find a law book that has a specific title and publication date.


Figure 8: In the catalog expert users have an option to use the "Advanced search" option as an accelerator to find the information they need. This is an effective example of flexibility and efficiency of use.

My Rating: 2.5 somewhat effective

Aesthetic and Minimalist Design

The law library's site has a rather minimalistic design. The pages are not noisy with information. The menu bars hold all the information that the user is looking to find. The law library did a good job at keeping nonsensical information to a minimum. The site is mildly aesthetically pleasing. The menu bar is a bit too large for what information is being displayed, but the blue color is nice and not overpowering. The image on the homepage is distracting, however, because of its graininess. Because the law library is a government owned site, they have a reputation of professionalism to uphold. Grainy photos indicate an unprofessional website, and for that image

to be on the homepage gives the users a bad first impression of the site's capabilities. Some of the pages have an excessive amount of white space that actually can distract the user from finding the function they need. An example of this can be found on the "Online research" page. The image of a man doing research overpowers the tiny search bar, therefore taking away from the functionality and efficiency of the site.
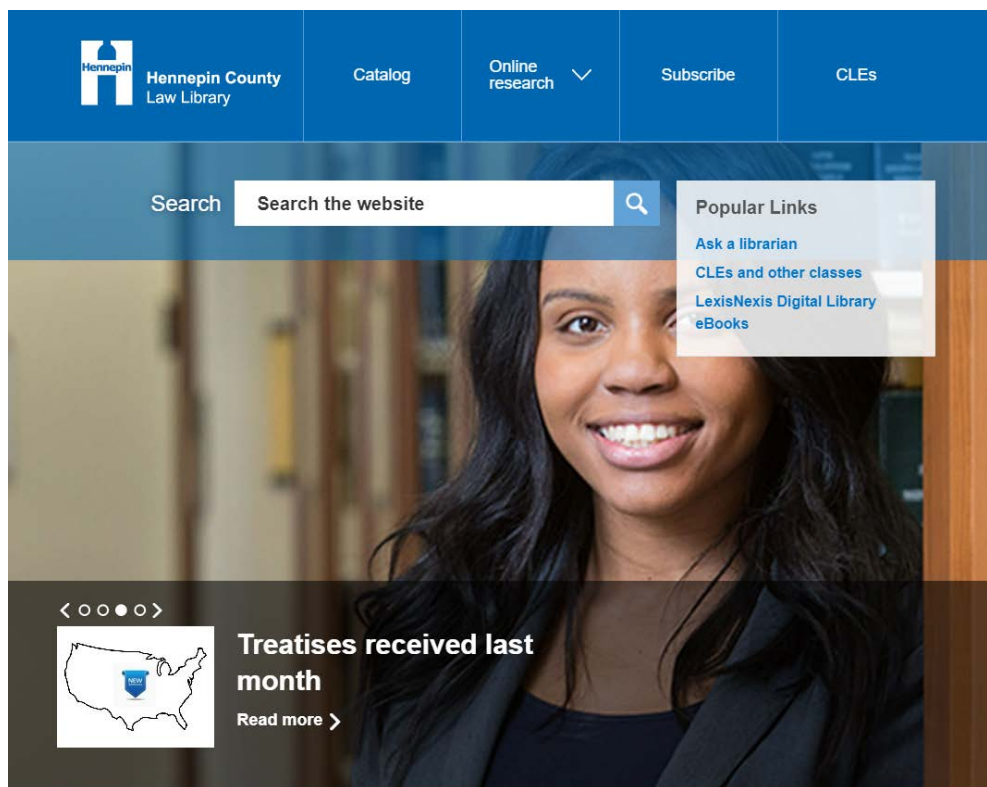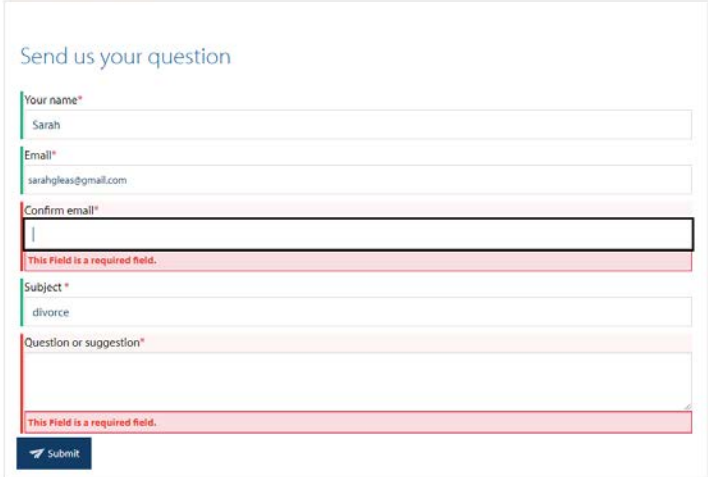

Figure 9: On the homepage the colors are consistent with that of the Hennepin County Library. This is a strong example of minimalist and aesthetic design. However, the image used is grainy which gives the site an unprofessional feel. This is a poor example of aesthetic and minimalist design.

My Rating: 2- ineffective

Help Users Recognize, Diagnose, and Recover from Errors

The law library does a good job at helping users recover from errors that occur in the "Ask a librarian" form. If the user doesn't fill in all of the required information, the site will not allow the form to be sent. It will also give users error messages in red that help guide the user in how to fill out the form correctly. The form also avoids being impolite by telling the user what they did right in filling out the form by highlighting it in green. In the catalog, the interface does not do a good job at notifying the user of unavailable items that they've added to their cart. The user is able to add an unavailable item to their cart and will not find out about that item's status until (presumably, I am unable to login) they login to their account to checkout the item. If they are not yet logged into their account, they can view their shopping cart, but there will still be no error message there indicating they've chosen an unavailable item. None of the search bars notify the

user or make the user aware of when they've typed in something incorrectly. If they type in something incorrectly, less results or no results will pop up. This makes it hard for users to understand where they've gone wrong in their search.

Figure 10: The ask a librarian feature shows a strong example of helping users recognize, diagnose, and recover from errors by calling out in red what the user did incorrectly

My Rating: 2.5- somewhat effective

Help and Documentation

The law library has no specific page for help or documentation on how to use their site. The site has no proactive revelations to help support the user. The closest thing to documentation that the law library has is the about page which can be found in the upper right hand corner. The about page primarily hosts information about what the user can find at the physical law library. It doesn't hold much information that helps the user better navigate the site. The law library relies on its "Ask a librarian" function to make up for its lack of documentation and help. This could cause users to abuse that form, instead of doing the research themselves on the website. This can be a personal choice of the library to have less documentation and to push users to interact with them if that is how they want to be answering important questions.

Figure 11: The about page is slightly effective example of help and documentation

My Rating: 1- very ineffective

My Conclusion

The Hennepin County Law Libraries site does a somewhat effective job of applying Nielson's 10 heuristics. The heuristics that the law library carried out effectively are user control and freedom and consistency and standards. The website is good at allowing the user to go back steps so they can quickly and efficiently navigate the site. The law library uses repetitive design of links, buttons, search bars, and drop down menus to help the user easily learn how to navigate the site. They adhere to external consistency by placing the homepage and contact information in places the user is familiar with on the page.

Hennepin County Library does a fair job at following the 10 heuristics, but there is plenty of room for improvement. Areas that could use some improvements relate to visibility of system status, recognition rather than recall, flexibility and efficiency of use, and helping users recognize, diagnose, and recover from errors. The libraries catalog does a poor job at showing users the availability status of materials which can cause visibility problems leading to user error. The site has some discrepancies between different search engine features. The Catalog has more abilities in terms of saving data and learnability, while the other search functions on the site don't include histories or suggestions for users. There are some parts of the site that use drop down menus that take the user more time to navigate, instead of just having it be available through the

search function. The areas that can use vast amounts of improvements relate to match between system and the real world, error prevention, aesthetic and minimalist design, and help and documentation. The site has a confusing layout of content for their drop down menus that cannot be predicted. They also use abbreviations in menu headings that would not be understood by a novice user. No suggestions are made when the user starts typing, and if they type something incorrectly there is no help to reroute them to the correct information. There are a lot of different search capabilities that have little to no explanation of what they are individually used for, which can create confusion for both novice and expert users. Some pictures and aesthetics of the site are not effective in communicating the professionalism of the site, or in helping the users get to the functional pieces of the site they are looking for. The site also has little to no documentation on how certain features should be used.

Recommendations for improving weaknesses

1. Having options for proactive help or more documentation on the site to help the users with navigation could help satisfy the help and documentation heuristic. Options for proactive help could include tips below different search functions that tell the user what they will find when using that specific search bar.
2. Organize drop down menus in a consistent way so that they can be more learnable for users trying to navigate it. Whether that be alphabetization, or order of content operations, it needs to have more structure.
3. Make it more prominent in the catalog when something is unavailable. Don't allow users to add something to their cart that isn't currently available to be checked out. Give users an error message when they try to add something unavailable to their cart.

Citations

Webb, H. (2020, Dec 2) *Benefits of Using Content Types on Library Websites.*
LibraryMarket.
https://www.librarymarket.com/blog/benefits-using-content-types-library-websites#:~:text
=Your%20library's%20website%20is%20the,you%20 may%20want%20to%20showcase.

Nielsen, J. (2020, Nov 15) *10 Usability Heuristics for User Interface Design.* Nngroup.
https://www.nngroup.com/articles/ten-usability-heuristics/