

Heuristic Evaluation

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Introduction & Objectives

Jakob Nielsen describes a heuristic evaluation as “one of the main discount usability engineering methods.”¹ The process of heuristic evaluation is a simple, effective, and low cost method for evaluating the usability of a website. The goal of a heuristic evaluation is to identify what usability issues may be present and the severity of the issues. It is also helpful in categorizing the issues into different priority levels so the larger issues can get fixed first.

We are conducting a heuristic evaluation on the Sno-Isle site in order to evaluate how well it adheres to heuristic principles. For this evaluation we will be using Jakob Nielsen’s [*10 Usability Heuristics for Interface Design*](#),² which are as follows:

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose and recover from errors
10. Help and documentation

¹ Jakob Nielsen <http://www.sccc.premiumdw.com/readings/heuristic-evaluation-nielson.pdf>

² Jakob Nielsen <https://www.nngroup.com/articles/ten-usability-heuristics/>

By evaluating the websites based on these principles we will be able to evaluate its effectiveness for the user and make informed suggestions for improvements.

Heuristic Methodology

To conduct the heuristic evaluation, each of the five members of our team completed a set of identical tasks. Team members examined the ease, speed, usability and effectiveness of the tasks against Nielsen's principles, made notes of problems encountered along the way, and assigned the task a letter grade based on their experience:

A – No Problem: This is not a usability problem

B – Cosmetic problem only: Can be left as-is, fix only if there is time

C – Minor usability problem: Needs to be fixed but not the worst problem

D – Major usability problem: Needs to be fixed

F – Usability catastrophe: Going to be a huge problem if this doesn't get fixed

Procedure and Materials

We conducted the scenarios and tasks of the evaluation with a total of five people individually, using multiple computers and browsers to catch as many potential problems as possible.

The Heuristic Testing Scenarios

Scenario 1

The user has recently moved to Snohomish county and would like to get a library card, but doesn't want to go to the library in order to get it.

Task 1

- Sign up for a library card and account on the site
- Login to the system with card or card number

Scenario 2

The user is an avid reader who wants to explore what their local library system has to offer. They want to use the search function on the website because it will show them all the books and resources in the region, not just at the library closest to them.

From the main page, find the following materials:

Tasks:

1. Scholarly articles on psychology
2. Recent bestsellers
3. Link to chat with librarian
4. “Web Design For Dummies” book by Lisa Lopuck, and put on hold to pick up at nearest library location

Scenario 3

The user is a working parent searching for fun or educational activities for their child, as well as connecting them with the community. User has a busy day-to-day schedule and needs to find an event that is age appropriate quickly. (user works from 8:00 a.m. - 2:30 p.m.)

Task 1

- Find a “homework help” or similar workshop that works with the user’s schedule
- Sign up for the workshop
- Mark it on the user’s calendar
- Set up an email reminder for this workshop

Findings and Results

	Naomi	Rosie	Calvin	Adam	Haben	
	Scenario 1, Task 1	Scenario 2, Task 1	Scenario 2, Task 2	Scenario 2, Task 3	Scenario 2, Task 4	Scenario 3, Task 1
Heuristics:						
1) Visibility of System Status	B B A B B	C C B A C	B C C A B	B C B A C	A A A A B	B D B C C
2) Match between system and the real world	C A A A B	D A D A B	D B B A B	C B D A C	B A B A B	C C B B B
3) User control and freedom	A A B A A	A C B B C	A B D B C	C A D B D	A A B B B	A B A D C
4) Consistency and Standards	B B B B B	D B D C D	C B D C C	A B C C C	B A B C C	D C A C D
5) Error Prevention	C B B D C	A C C B B	B B D B C	B B D B B	A B C B C	A C A A C
6) Recognition rather than Recall	B B A A B	A D A C B	C B C C C	B B C C C	B A A C B	B B B C C
7) Flexibility & Efficiency of Use	D C B C B	C C B B C	C B A B B	B B C B B	C A A B B	B C B D D
8) Aesthetic & Minimalist Design	D C B C B	A B A B B	C B C B B	B B B B B	B B B B B	C B B C C
9) Help User recognize, Diagnose & Recover from Errors	B D A D C	C B D C D	B B C C D	B A D C D	B B B C C	A C B B B
10) Help & Documentation	D C A A B	C C F C C	C C D C D	C A D C D	B A C C C	B C B C B

Scenario 1 - New User

On the home page, the link to start the new library card process is prominent, above the nav. The link is a simple hyperlink and may be more effective as a button. However in the inner page this link takes you to, the actual link to get a new card is at the bottom of the home page, after a lot of extraneous text. The button at the bottom of the page says 'Begin New Customer Registration,' though it would more accurately be labeled 'Get an eCard.' There are both English and Spanish 'begin' buttons side by side, rather than a language toggle button for the whole page (which appears elsewhere on the site).

Welcome to Sno-Isle Libraries

Do you think you have a Sno-Isle account already?

Use the [Account Lookup Tool](#) or [contact customer service](#) to inquire.

Instructions:

- Online registration for a Sno-Isle library card is open to Snohomish and Island County residents, excluding Woodway. View [library card eligibility](#) for more information.
- A valid email address is required to complete the online form. If you do not have an email or do not wish to provide an email, please apply in person at [your library](#).
- The system issues you a temporary library card number (eCard) instantly. The temporary library card number will be valid for 30 days. Before it expires, visit the check out desk in any Sno-Isle Library, with [acceptable identification](#), to receive your regular library card number.
- Temporary eCard allows you immediate access to:
 - online databases
 - place holds on library materials
- You must obtain a **regular** card to:
 - check out library materials
 - download eBooks and other digital media from Overdrive and 3M
 - maintain your [borrowing history](#)

[Begin New Customer Registration](#) [Iniciar registro de nuevos en español](#)

Get a Library Card in more Languages

Quick links

- [Account Lookup Tool](#)
- [Help & FAQs](#)
- [Library Account Help](#)
- [Library Card Eligibility](#)
- [Maintain Borrowing History](#)
- [Welcome Brochure](#)

Get a Card



Sign up for a library card!

In the registration page, the forms ask for the mobile carrier of the user, which is a strange request. The last four numbers of the the user's phone number become the user's default password. However the user is not informed that this will be the case when they are filling in the registration form (the default password is described later on the registration confirmation page). This could lead immediately to lost passwords if the user prefers not to use their real phone number.

Thank you for registering online for a Sno-Isle library card. An eCard number will be sent to your email account shortly.

If you entered a phone number, your account password is the last 4 digits of your phone number, otherwise it is: **1234**

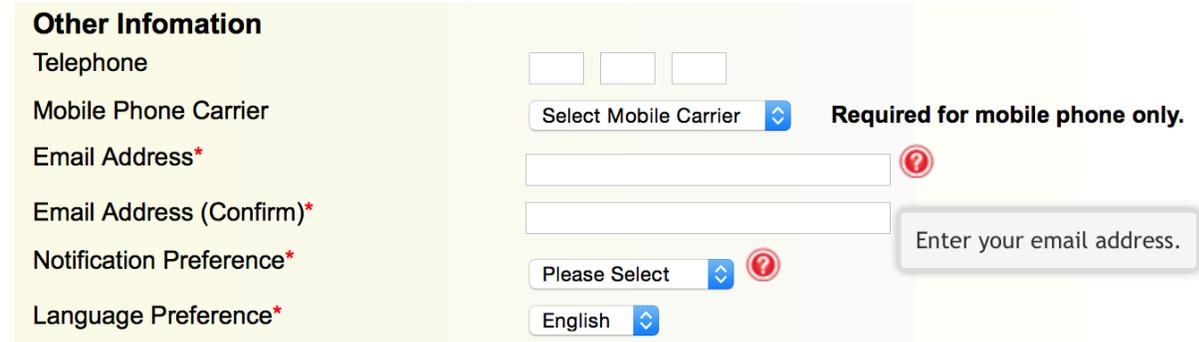
Here and elsewhere, empty fields do not trigger helpful error messages but simply re-prompt the user. The error message when a field is left empty on the signup form is a red icon of a question mark with no prompt text, but the prompt text appears when the

mouse is hovered over the icon. It would be more helpful for the prompt text to appear on the actual page so the user knows exactly what is wrong.



Street Address* 

When the user hovers over the question mark icon:



Other Information

Telephone

Mobile Phone Carrier  **Required for mobile phone only.**

Email Address* 

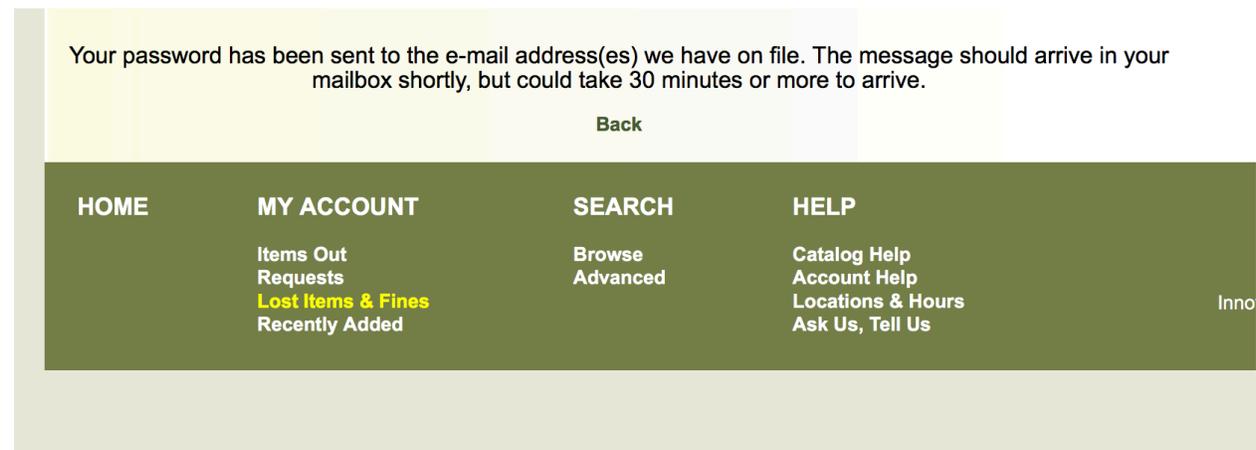
Email Address (Confirm)*

Notification Preference*  

Language Preference* 

Enter your email address.

Login was labeled on the home page as 'My Account,' which is somewhat unclear. The inner login page hints at the default password as the last four numbers of the user's phone number, a serious security issue.



Your password has been sent to the e-mail address(es) we have on file. The message should arrive in your mailbox shortly, but could take 30 minutes or more to arrive.

[Back](#)

HOME	MY ACCOUNT	SEARCH	HELP
	Items Out Requests Lost Items & Fines Recently Added	Browse Advanced	Catalog Help Account Help Locations & Hours Ask Us, Tell Us

Inno

When a password recovery was requested (raw password recovery is a security issue), it took a tremendously long time, up to 30 minutes. Lost account numbers can be looked up through entering the user's real name and other data, but incorrect entries lead simply to an apology page with no links to try again or try something different.

Multiple library accounts are allowed using identical email addresses.

Scenario 2 - Catalog and Searching

The inner catalog search page, as well as many other pages, displays a totally different navbar than the home page. The main catalog search has helpful autocomplete based on the titles in the system. The search results sometimes returned similar results with the entered keywords in them above the exact result.

Search result items can be viewed by library through a popup, as a summary on the results page or on a separate page for a full display. The book image on the results page can also be clicked on, which opens a different summary popup. These separate item info displays are nonstandard and confusing. When listing availability of a book by library, the results read 'Shelf' rather than 'In Stock' or 'Available.'

The screenshot displays a library catalog search interface. On the left, a search bar contains the keyword 'web'. Below it, search filters are set to 'Search by Limit by' and '1 - 10 of 3103'. The main results area shows a list of items, with the first item being 'The web : the graphic novel' by Parks, Ande, author. (2014). The results are organized by library: Darrington Library (1 of 1 available), Edmonds Library (1 of 1 available), and Marysville Library (1 of 1 available). Each library entry shows 'Adult Graphic Novel' and 'FIC PARKS' with a status of 'Shelf' and a type of 'Book'. A detailed view of the book is shown on the right, including the title 'The web : the graphic novel / Jonathan Kellerman ; adapted by Ande Parks ; art by Michael Gaydos.', author 'Parks, Ande, author.', publisher 'New York : Ballantine Books, [2014] ©2014', and description '164 pages : chiefly illustrations : 27 cm'. The current requests are 0, and system availability is 4 of 4. The edition is 'First edition.' and the summary is 'After a narrow escape from his burning house, psychologist Dr. Alex Delaware is ready for a relaxing getaway. And revered scientist Dr. Woodrow Wilson Moreland has just the ticket for Alex and his girlfriend, Robin Castagna: an all-expenses-paid vacation to a Pacific island retreat. It won't all be fun in the sun, however. But helping Dr. Moreland prepare his fascinating case files for publication is business Alex is happy to mix with pleasure. Unfortunately, pleasure is in short supply on the remote island of Aruk, with its dark history hanging heavy in the tropical air. Though reports of a bloody native mutants haunting the jungle may be rumored, an unsolved murder of a young woman is very much in the air. Alex and Robin get from a battling pair of scientists: a scandal-hunting writer, a duo c'.

Multiple bestsellers lists and other lists are prominent in the books section and easy to find.

The screenshot shows a search interface with the keyword 'psychology' entered in the search bar. The search filters are set to 'Search by Any Field' and 'Limit by All Formats'. Below the search bar, there is a 'More Search Options' link. A red text prompt asks 'Did you mean psychology?'. At the bottom, it states 'No titles found (0 hits) - Try these tips:'. The interface is clean and modern, with a white background and blue accents.

Error prevention for misspelled words as shown above when searching in the Catalog.

Searching for academic literature and journals is somewhat hard to find. There is no link titled 'Journals' or 'Academic Journals' anywhere on the site; rather these items are contained within the 'Research' heading, which is confusing and takes time to find. The inner research page contains a very broad number of disparate topics that don't have any obvious connection to each other, and further clicks on the 'Academic' CTA finally reveal external databases and articles on health, our initial goal for this task.

Research Resources

[All Databases, A-Z](#) • [Kids Homework Help](#) • [Teen Homework Help](#)



Reserving a book is linked prominently from any search result display.



'Ask Us Tell Us' is not a platform standard name for finding the live chat function. Beyond the name, the chat is easy to find from the homepage, and easy to use. The anonymous chat option, and the explanation offered, is nice. Librarians generally answered chat requests very quickly.

Hello, anonymous (No e-mail provided)

Chat Transcript: [How was Chief Seattle's name actually pronounced?](#)

Ellen - Seattle Public Library: Librarian 'Ellen - Seattle Public Library' has joined the session.

Ellen - Seattle Public Library: interesting question!

Ellen - Seattle Public Library: i'm going to find out for both of us right now

Ellen - Seattle Public Library: Chief Seattle's name is pronounced approximately "See-ahlish."

anonymous: Thank you!

Ellen - Seattle Public Library: that's from historylink http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=5071

Newest Message

Ellen - Seattle Public Library: a very reliable source. there's a link to an audio pronunciation too

Compose message and send to librarian:

Send

[Preferences](#) | [Help](#) | [Exit Chat](#)

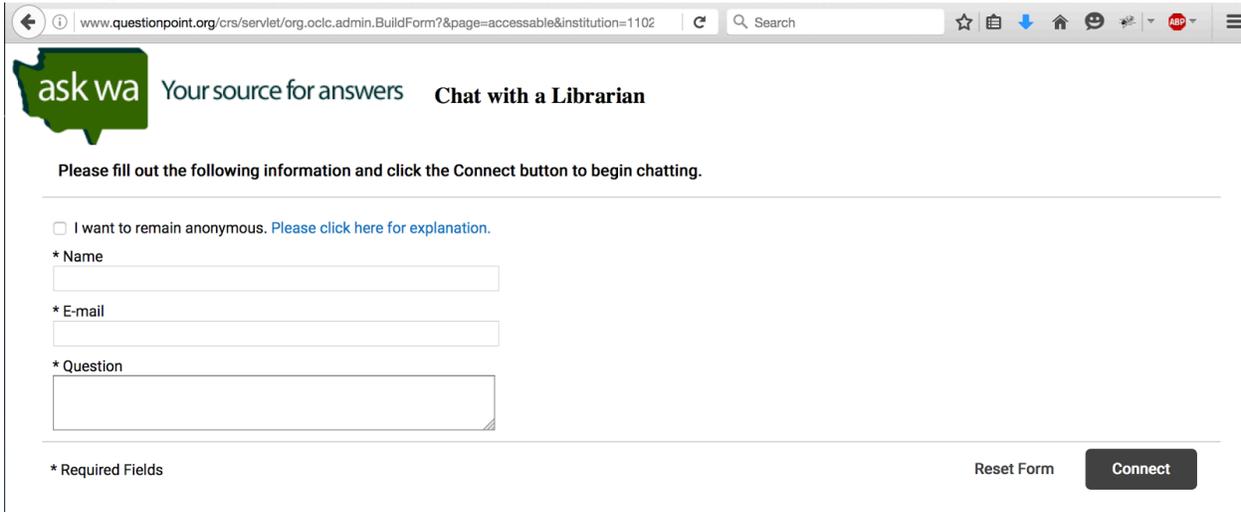
There is another link for librarian chat in the footer sub-nav, but the nav appears on hover only making it almost impossible to find if you don't know it is there already.



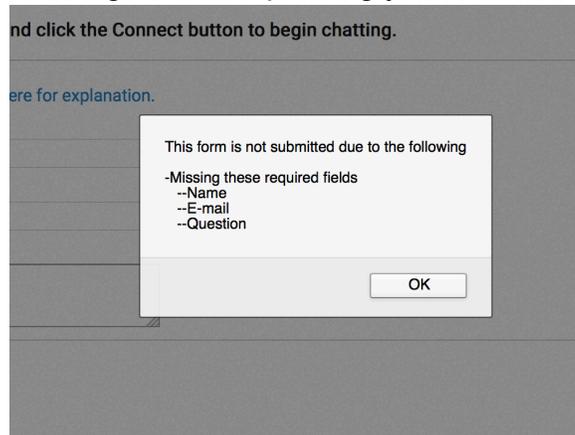
Footer nav on hover:



It takes you to another site which seems to be a universal Librarian Chat for the State of Washington.



You can be anonymous when asking a librarian a question but when you forget to fill out a requirement, an error message shows up telling you which fields you missed.



Scenario 3 - Events & Calendar

The events section is below the fold and absent from the navbar on the home page. The inner event page displays links for searching by location most prominently, with a sidebar displaying ongoing event topics. There is no form here for searching by event topic or keyword. There are also several short paragraphs below the location list that seem to describe ongoing event topics or groups of topics, but there are no links to these. This is a missed opportunity to link to a search query result.

Ongoing programs

- [Book discussions](#)
- [Catalog search classes](#)
- [Issues That Matter](#)
- [Storytimes](#)
- [Teen programs](#)

Help and tips

Accommodations for people with disabilities will be provided upon request. Please contact [your library](#) two weeks in advance.

[View and Print](#) is a handy guide to searching the Events and Programming calendar.

[Classes & Events Subscription Help](#)

Clicking on a library location takes the user to a calendar-style event search page. This page is a plugin and/or utilizes a third party, Evanced. Here searches can be conducted in an advanced matrix fashion. The text size defaults to very small, and difficult to read. The functionality on this page is generally good and visible, though the search sidebar is referred to as a 'Slider.' The links of available events on the calendar are not made apparent enough, it is not clear that the text is a link.

SEARCH x

Find Clear

Keyword:

Display Format: Calendar List

Locations:

- ALL LOCATIONS
- Arlington
- Brier
- Camano Island
- Clinton
- Coupeville
- Hamlet

Event Types:

- ALL EVENT TYPES
- Adult
- Books and Authors
- Business
- Computers and Tech
- Family Program
- Friends of the Library

Age Groups:

- All Age Groups
- Preschool Age 0 - 5
- School-Age 6 - 11
- Tweens Age 9 - 13
- Teens
- Adults
- All Ages

Find Clear

The events that require sign up are designated by the underlined event titles. Click on the underlined event title to sign up for the event. Click on "Display Your Personal Schedule" to see the events for which you are currently signed up.

Filter by types of events or change display formats by clicking here: [Search](#)

Search Slider | Display Personal Schedule | View: [Calendar View](#) | [List View](#) | [Print View](#) | [RSS Feed](#) | [Home](#)

<< Prev Year Jan Feb Mar Apr **May** Jun Jul Aug Sep Oct Nov Dec Next Year >>

< Prev **MAY 2016** Next >

Click to View Ongoing Events							Click to View Ongoing Events								
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 19	1	2	3	4 Homework Help	5	6	7	Week 20	8	9	10	11 Homework Help	12	13	14
Week 21	15	16	17	18 Homework Help	19	20	21	Week 22	22	23	24	25 Homework Help	26	27	28
Week 23	29	30	31					Week 24							

<< Prev Year Jan Feb Mar Apr **May** Jun Jul Aug Sep Oct Nov Dec Next Year >>

< Prev **MAY 2016** Next >

The details of each calendar event are contained in a popup box that only appears when the user clicks on an event link. This is problematic for two reasons, the first being that the text links do not look like links so the user may not know to click on them. Secondly, even if the user knew to click on the text link there is no indication that clicking on the link will lead to further information.

<Prev MAY 2016 Next>			
Click to View Ongoing E			
y	Wednesday	Thursday	Friday
	4 <input type="radio"/> Homework Help	Homework Help Time: 4:00 PM - 5:00 PM Desc: Assignment have you stumped? Stop by for free homework assistance for students in grades K-8 every Wednesday. A teen homework volunteer will be waiting to help you in our teen section. Age(s): School-Age 6 - 11, Tweens Age 9 - 13 Library: Edmonds	
	11 <input type="radio"/> Homework Help		
	18 <input type="radio"/> Homework Help	19	20

Error messages when signing up for events are accomplished effectively through alert popups with good error explanations.

