

INSC 588 Human-Computer Interaction

Team Project

Interface Evaluation Using Cognitive Walkthrough

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Introduction

For this project our selected interface is the Knox County Public Library's catalog (www.knoxlib.org). Our group chose this interface for several reasons. The first is that it provided us a new perspective, as all team members previously worked with UTK's library site for other assignments. This interface also gave us the opportunity to focus on tasks for a different audience - senior citizens. Our design change suggestions are focused on improvements for senior citizens' interaction experience. Below is a screenshot of the Knox County Public Library catalog interface.

The screenshot displays the Knox County Public Library catalog homepage. At the top left is the library's logo. To the right, there is a login section with fields for 'Library Card Number' and 'PIN', a 'Sign in' button, and a link for 'I forgot my PIN'. Below the header is a navigation menu with links: 'NEW SEARCH', 'LIBRARY HOME', 'HOURS AND LOCATIONS', 'FIND IT FAST!', 'KIDS' LIBRARY', and 'MY ACCOUNT'. A secondary navigation bar contains links: 'Go Back', 'Bookmark this page', 'Permalink', and 'Logout'. The main content area is divided into several sections. On the left, there is a search section with tabs for 'Catalog', 'Keyword', 'Browse', and 'Exact'. The 'Keyword' tab is active, showing a search input field, a 'words or phrase' dropdown, and a 'Search' button. Below the search field are dropdowns for 'Library' (set to 'ALL') and 'Item Format' (set to 'ALL'), along with a 'Power Search' link. To the right of the search section is a 'New at KCPL' section listing various categories like 'Adult Fiction', 'Adult Nonfiction', 'Children's Books', etc. Below the search section is an 'Our Most Popular Titles' section listing 'Hottest title', 'Hottest author', and 'Hottest subject'. At the bottom, there are two columns of 'Recommended Reading' and 'Best Sellers' with links to various award-winning books and best-selling titles.

The top of the catalog page includes a menu with links to the library home, hours and locations, find it fast, kids' library, and account access. The menu also has a link to begin a new search on the left side of the page. The top-right corner of the page includes a login form for

accessing a library account. Just above the keyword search are options for navigating the catalog including go back, bookmark this page, permalink, and logout.

The interface has a basic keyword search as the default option when you go to the catalog page. The search bar appears near the top of the page, under the main menu and catalog navigation menu. The catalog has an option for "Power Search", but it's unlikely that senior citizens would use it often. The library catalog also displays the current most popular titles, recommended reading, and best sellers below the search bar on the catalog. The right side of the page has book categories that fall under Adult Fiction, Adult Nonfiction, Children's Books, Audiobooks, and Teen Books. It also includes links to other resource types, such as DVDs, feature films, documentary films, television programs, and music.

Task Descriptions

Since our cognitive walkthrough project required creating two tasks to complete as though we were senior citizen patrons, we decided to select tasks relating to topics that senior citizens might search for in a library. The first task we selected was to locate a specific health-related book "22 day revolution: the plant-based program that will transform your body, reset your habits and change your life".

This book was selected because in our groups' experiences with senior patrons, we noticed that one of the most popular topics they seek information on is health - both in treatment of diseases and preventative measures. We selected the "22 day revolution" book because it would be useful to a senior patron hoping to learn more about the health benefits of plant-based diets. The general steps to complete this task are outlined below.

Task 1

1. Go to knoxlib.org.
2. Click “Go to the catalog”.
3. Locate the book “22 day revolution: the plant-based program that will transform your body, reset your habits and change your life.”

The second task we selected for our cognitive walkthrough involved another topic that is often pursued by senior library patrons - hobbies. We initially searched for hobby-related ebooks through the Knoxville Public Library catalog, but came up with very few results - mostly about knitting. Instead of having a specific resource target for our second task, we instead decided to point the patron in the direction of a reading list, so they could select their own resource. This allowed us to evaluate the placement and clarity of links on the library catalog. The second task for our cognitive walkthrough was to view the recommended reading list for “Cookbook Awards”. The basic steps to complete this task are outlined below.

Task 2

1. Go to knoxlib.org.
2. Click “Go to the catalog” and pull down to bottom.
3. Click “More Best Seller”.
4. View the recommended reading list for “Cookbook Awards”.

Questions Asked During Tasks

- a. Is the correct action sufficiently evident to the user?
- b. Does the user notice that the correct action is available?

- c. Does the user associate and interpret the response from the action correctly? (textbook)
- d. What does the user think when completing an action?
- e. What steps do they take?
- f. How do they feel about the interface?
- g. What part of the interface can be improved and how?

Benchmark Tasks

Below are the task benchmarks we completed. For the benchmarks, our team did not complete the tasks as a senior library patron would. Instead our group completed the tasks as we would approach locating the resources.

Task 1: Locate the book “22 day revolution: the plant-based program that will transform your body, reset your habits and change your life”

1. Go to knoxlib.org
2. Click “Go to the catalog”.
3. Complete a keyword search for “22 day revolution”.
4. Select the book from the returned results.

Task 2: View the recommended reading list for “Cookbook Awards”.

1. Go to knoxlib.org
2. Click “Go to the catalog”.
3. Look under the “Recommended Reading” section of the catalog page.
4. Select “More recommended reading lists”.
5. Select “Cookbook Awards” from the reading list options.

After completing the benchmark tasks as a group, our experimenters took on the role of senior library patrons and completed a cognitive walkthrough for each task.

Task 1: Cognitive Walkthrough

Users We want Knox County Public Library to provide valuable information to senior (55+) citizens and help seniors with their daily life.

Task Locate the book “22 day revolution: the plant-based program that will transform your body, reset your habits and change your life.”

Interface Existing web page knoxlib.org.

Action Steps

1. Go to knoxlib.org.
2. Click “Go to the catalog”.
3. Locate the book “22 day revolution: the plant-based program that will transform your body, reset your habits and change your life.”

Action:

Go to knoxlib.org.

Is the correct action sufficiently evident to the user?

- Users can type web URL directly in the website.
- Users can also Google “Knoxville Library” or “Knox County Public Library” if they are familiar with Google search engine to access the site.

Does the user notice that the correct action is available?

- The target “Knox County Public Library” can be found in at least two ways.

Does the user associate and interpret the response from the action correctly?

- Users can go to the website correctly.

What does the user think when completing an action?

- The website is easy to access.

What steps do they take?

- Users normally type the address of website directly if they know it, or search for the website using a search engine.

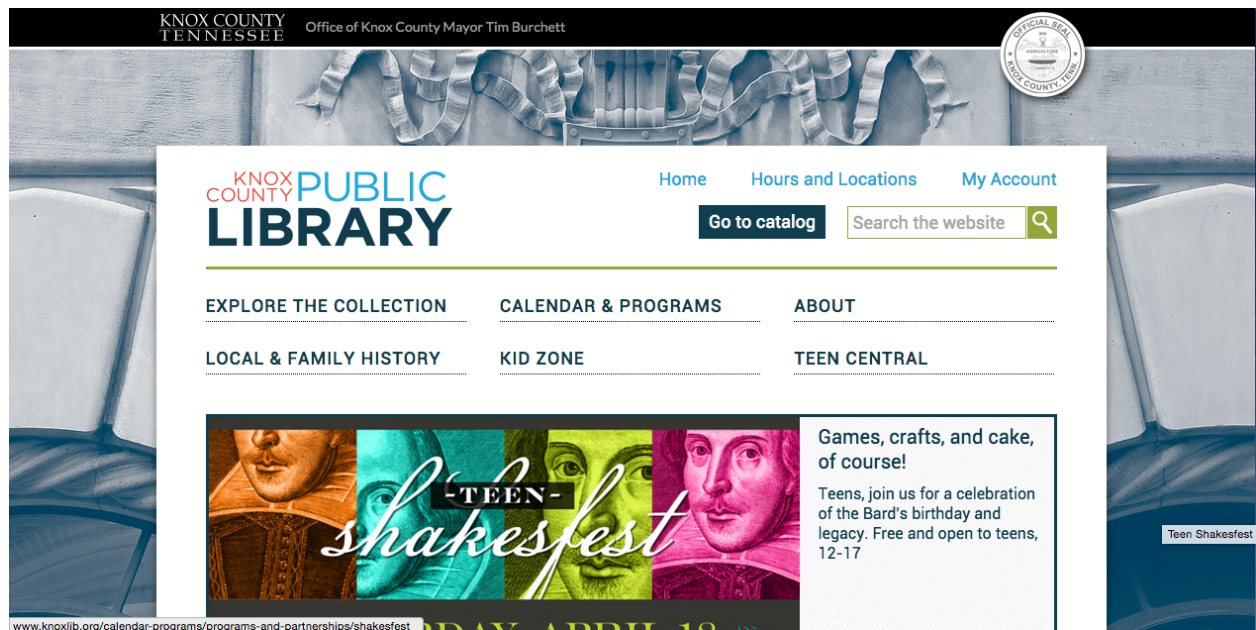
How do they feel about the interface?

- The amount of information provided on the homepage is not overwhelming.
- The search bar is relatively obvious, as well as the “Go to Catalog” button.

What part of the interface can be improved and how?

- The design could be better, with larger fonts and better organized.

Screen after Action



Action:

Click “Go to the catalog”.

Is the correct action sufficiently evident to the user?

- By the goal to locate a book, user probably does not know the sufficient step is clicking “Go to the catalog”.

Does the user notice that the correct action is available?

- No, user has been notified to click “Go to the catalog”.

Does the user associate and interpret the response from the action correctly? (textbook)

- The user goes to search bar first, then she was asked to click “Go to the catalog”.

What steps does the user take?

- Type the book name in the search bar, but did not find it.
- Then they went back to the home page.
- At last, she is told to click “Go to the catalog”.

What does the user think when completing an action?

- Although “Go to Catalog” is located near the search bar, it is easy for senior patrons to overlook the button.

How does the user feel about the interface?

- A little bit confused for a starter that search needs to be done from “Go to the catalog”.

What part of the interface can be improved and how?

- Search bar should be better connected with “Go to the catalog”, for instance, books should be found through typing name in the search bar.
- Sub-bars should be created below search bar instead of “Go to the catalog”, sub-bars should be like “E-books”, “books”, “audiobooks”.

Screen after Action



Knox County Public Library Catalog

Library Card Number:

PIN:

[Sign in](#)

[I forgot my PIN](#)

[NEW SEARCH](#) [LIBRARY HOME](#) [HOURS AND LOCATIONS](#) [FIND IT FAST!](#) [KIDS' LIBRARY](#) [MY ACCOUNT](#)

[Go Back](#) [Bookmark this page](#) [Permalink](#) [Logout](#)

Catalog ☒ Keyword ☐ Browse ☐ Exact

words or phrase

Library:

Item Format:

[Power Search](#)

New at KCPL

[Adult Fiction](#)

-- Fantasy

-- Horror and Occult

-- Inspirational Fiction

-- Large Print Fiction

-- Mystery

Action:

Locate the book “22 day revolution: the plant-based program that will transform your body, reset your habits and change your life.”

Is the correct action sufficiently evident to the user?

- Yes, user needs to type the name of the book.

Does the user notice that the correct action is available?

- User was not sure if she can find the result by typing the name.

Does the user associate and interpret the response from the action correctly? (textbook)

- Yes, the user typed “22 day revolution” correctly.

What steps does the user take?

- Just type the name of the book in the search bar without changing anything else.

What does the user think when completing an action?

- It is not hard to reach the goal by clicking “going to the catalog”

How does the user feel about the interface?

- Easy but useless information are listed on the website.

What part of the interface can be improved and how?

- Better design of sub-bars on the search page.

Screen after Action

The screenshot shows the Knox County Public Library website. At the top left is the logo "KNOX COUNTY PUBLIC LIBRARY". To the right are input fields for "Library Card Number:" and "PIN:", a "Sign in" button, and a link "I forgot my PIN". Below the logo is the text "Knox County Public Library Catalog". A navigation bar contains links: "NEW SEARCH", "LIBRARY HOME", "HOURS AND LOCATIONS", "FIND IT FAST!", "KIDS' LIBRARY", and "MY ACCOUNT". A dark blue bar below the navigation contains links: "Go Back", "Limit Search", "New Search", "Marked Items", "Bookmark this page", "Permalink", and "Logout". The main content area is titled "Search Results" and shows a search for "words or phrase '22 day revolution'" with 3 titles found, sorted by "New to Old". A "Mark all on this page" button is present. The first result is "The 22 day revolution : the plant-based program that will transform your body, reset your habits, and change your life" by Borges, Marco, published in 2015. It includes a "Mark" button and a "Place Hold" button. To the right of the results are two sidebars. The first sidebar, "You Found Titles in Categories:", lists "History: America and United States", "Home Economics", and "Literature of Music". The second sidebar, "New at KCPL", lists "Adult Fiction", "-- Fantasy", and "-- Horror and Occult".

Task 2 Cognitive Walkthrough

Users We want Knox County Public Library to provide useful information to senior (55+) citizens for their health and habits.

Task View the recommended reading list for “Cookbook Awards”.

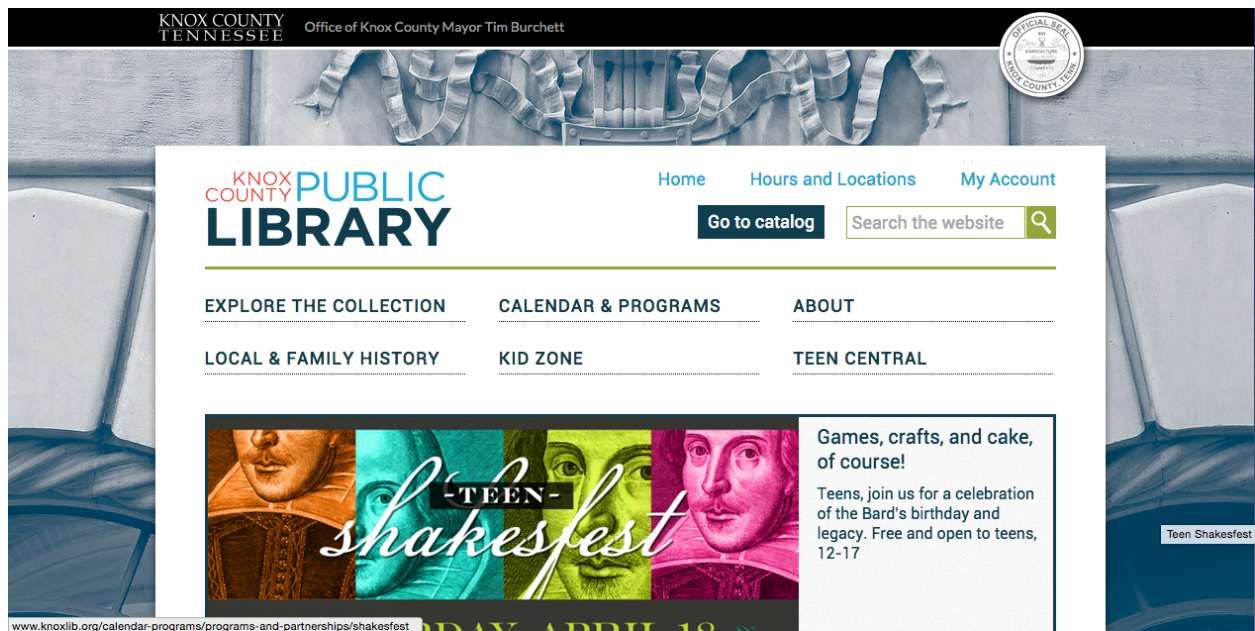
Interface We have existing web pages knoxlib.org.

Action Steps

1. Go to knoxlib.org.
2. Click “Go to the catalog” and pull down to bottom
3. Click “More recommended reading lists”
4. View the recommended reading list for “Cookbook Awards” on the left.

Action:

1.Go to knoxlib.org.



Is the correct action sufficiently evident to the user?

- Senior (55+) citizens usually types *knoxville county public library* in the search bar to access the website
- Add knoxlib.org in their favorite page.

Does the user notice that the correct action is available?

- The action is visible and easy to find

Does the user associate and interpret the response from the action correctly?

- Users can go to the website effectively

What steps does the user take?

- Add knoxlib.org in their favorite page and click it directly.

What does the user think when completing an action?

- It's easy to access the website

How does the user feel about the interface?

- It's a little bit complicated to find what they want and the font size is not big enough.

What part of the interface can be improved and how?

- Increase the font size.

Action:

2. Click “Go to the catalog” and pull down to bottom.

The screenshot displays a library website with the following sections:

- Our Most Popular Titles**
 - Hottest title: [Geronimo Stilton graphic novel](#)
 - Hottest author: [Osborne, Mary Pope](#)
 - Hottest subject: [Stories in rhyme.](#)
 - [More items](#)
- Recommended Reading**
 - [Pulitzer Prize for Fiction](#)
 - [Agatha Award \(Mystery\)](#)
 - [Anthony Award \(Mystery\)](#)
 - [Man Booker Prize for Fiction](#)
 - [Volunteer State Books Awards \(TN\)](#)
 - [More recommended reading lists](#)
- Best Sellers**
 - [New York Times Fiction](#)
 - [Barnes & Noble Business](#)
 - [LA Times Fiction](#)
 - [LA Times Nonfiction](#)
 - [New York Times Business](#)
 - [More best seller lists](#)
- Genre Categories (Sidebar)**
 - [Mystery](#)
 - [Romance](#)
 - [Science Fiction](#)
 - [Westerns](#)
 - [Adult Nonfiction](#)
 - [Biographies](#)
 - [Cookbooks](#)
 - [Large Print Nonfiction](#)
 - [Children's Books](#)
 - [Children's DVDs](#)
 - [Audiobooks -- Fiction](#)
 - [Fantasy Audiobooks](#)
 - [Horror Audiobooks](#)
 - [Inspirational Fiction Audiobooks](#)
 - [Mystery Audiobooks](#)
 - [Romance Audiobooks](#)
 - [Science Fiction Audiobooks](#)
 - [Western Audiobooks](#)

Is the correct action sufficiently evident to the user?

- Yes, it is.

Does the user notice that the correct action is available?

- The “Go to Catalog” button is visible enough on the homepage and easy to find.

Does the user associate and interpret the response from the action correctly? (textbook)

- It's easy to find, but there are still other functions disturb the way to click “Go to Catalog”.

What steps does the user take?

- Type “Cookbook Awards” in the search bar on homepage, but did not find it.

What does the user think when completing an action?

- The home page is a little bit complicated although “Go to Catalog” is easy to access.

How does the user feel about the interface?

- It’s not easy for users to find the most important information they want especially for senior (55+) citizens.

What part of the interface can be improved and how?

- Give them A-Z options to choose.

Action:

3.Click”More recommended reading lists”

KNOX COUNTY PUBLIC LIBRARY

Library Card Number:

PIN:

[Sign in](#)

[I forgot my PIN](#)

Knox County Public Library Catalog

[NEW SEARCH](#) [LIBRARY HOME](#) [HOURS AND LOCATIONS](#) [FIND IT FAST!](#) [KIDS' LIBRARY](#) [MY ACCOUNT](#)

[Go Back](#) [Bookmark this page](#) [Permalink](#) [Logout](#)

Recommended Reading

- [Pulitzer Prize for Fiction](#)
- [Agatha Award \(Mystery\)](#)
- [Anthony Award \(Mystery\)](#)
- [Man Booker Prize for Fiction](#)
- [Volunteer State Books Awards \(TN\)](#)
- [Caldecott Medal \(Children's\)](#)
- [Carnegie Award \(Children's\)](#)
- [Christy Award \(Fiction\)](#)
- [Canadian Library Assn Book Awards for Children & Young Adults](#)
- [Cookbook Awards](#)
- [Coretta Scott King Award \(Children's\)](#)
- [Edgar Award \(Mystery\)](#)

Best Sellers

- [New York Times Fiction](#)
- [Barnes & Noble Business](#)
- [LA Times Fiction](#)
- [LA Times Nonfiction](#)
- [New York Times Business](#)
- [New York Times Nonfiction](#)
- [New York Times Children's Picture Books](#)
- [Publishers Weekly Audio Fiction](#)
- [Publishers Weekly Audio Nonfiction](#)
- [Publishers Weekly Children's Fiction](#)
- [Publishers Weekly Fiction](#)
- [Publishers Weekly Nonfiction](#)

Is the correct action sufficiently evident to the user?

- No, it’s not easy to find it.

Does the user notice that the correct action is available?

- The action is visible because it use another color. However, the user may not realize to choose it.

Does the user associate and interpret the response from the action correctly?

- Yes, although it's on the bottom of the page, the text color is different which makes the option more visible.

What steps does the user take?

- Type "Cookbook Awards" in the search bar on homepage, but cannot find the match one.

What does the user think when completing an action?

- It's good enough for them to find it if they obey the action.

How does the user feel about the interface?

- The new page's title reflects the action.

What part of the interface can be improved and how?

- Increase the font size and pick up more distinguished color.

Action:

4.View the recommended reading list for "Cookbook Awards"

The screenshot shows the Knox County Public Library Catalog homepage. At the top, there is a navigation bar with links: NEW SEARCH, LIBRARY HOME, HOURS AND LOCATIONS, FIND IT FAST!, KIDS' LIBRARY, and MY ACCOUNT. Below this is a dark blue banner with links: Go Back, Bookmark this page, Permalink, and Logout. The main content area is divided into two columns. The left column is titled 'Cookbook Awards - Recommended Reading' and contains a list of two books. The right column is titled 'New at KCPL' and contains a list of book genres.

KNOX COUNTY PUBLIC LIBRARY

Knox County Public Library Catalog

Library Card Number:
PIN:
[Sign in](#)
[I forgot my PIN](#)

[NEW SEARCH](#) [LIBRARY HOME](#) [HOURS AND LOCATIONS](#) [FIND IT FAST!](#) [KIDS' LIBRARY](#) [MY ACCOUNT](#)

[Go Back](#) [Bookmark this page](#) [Permalink](#) [Logout](#)

Cookbook Awards - Recommended Reading

The IACP Cookbook Awards are presented annually by the International Association of Culinary Professionals (IACP)

1. Details	Jerusalem: A Cookbook Yotam Ottolenghi 2 copies available at Farragut Branch and Lawson McGhee Library 2013 Cookbook of the Year
2. Details	Modernist Cuisine Nathan Myhrvold 6 copies available at Lawson McGhee Library 2012 James Beard Cookbook of the Year

New at KCPL

- [Adult Fiction](#)
- [-- Fantasy](#)
- [-- Horror and Occult](#)
- [-- Inspirational Fiction](#)
- [-- Large Print Fiction](#)
- [-- Mystery](#)
- [-- Romance](#)
- [-- Science Fiction](#)
- [-- Westerns](#)

Is the correct action sufficiently evident to the user?

- Yes, this task is not hard to achieve.

Does the user notice that the correct action is available?

- Yes, the user found the “cookbook awards” in the recommended reading list.

Does the user associate and interpret the response from the action correctly?

- Yes, the title is obvious and clear.

What steps does the user take?

- Click the “cookbook awards” on the recommended reading list

What does the user think when completing an action?

- The user thinks this page states information clearly that helps her to reach the goal.

How does the user feel about the interface?

- Easy to navigate and locate

What part of the interface can be improved and how?

- This page is good but more information could be provided in the results.

Problems & Errors

Questions determining severity (Nielsen, 1995):

1. How frequent is the problem?
2. Is the problem difficult or easy for the user to overcome?
3. Is it a one-time problem that users can overcome once they know about it or will users repeatedly be bothered by the problem?

Severity Scale (Nielsen, 1995):

- 0 = I don't agree that this is a usability problem at all
- 1 = Cosmetic problem only: need not be fixed unless extra time is available on project
- 2 = Minor usability problem: fixing this should be given low priority
- 3 = Major usability problem: important to fix, so should be given high priority
- 4 = Usability catastrophe: imperative to fix this before product can be released.

Problems/Errors:

During the completion of Task 1 and Task 2, our users struggled with the same interface problems: text/font size, the location of links (reading list, selection, etc.), and the complicated structure of the website itself. To determine the severity of each problem, we used our observational data to answer the questions above for each concern.

- Problem: Text/Font Size Rating: 3
 - Frequent problem - concern for every task action
 - User cannot overcome problem - no option to increase website font/text
 - Users will be repeatedly bothered by the problem
- Problem: Location of Links Rating: 2
 - Frequent problem - concern for every task action
 - User can overcome problem within relatively short amount of time
 - Users will be able to overcome problem with locating links after repeated use of site.
- Problem: Complicated Website Structure Rating: 4
 - Frequent problem - concern for every task action
 - User may struggle to overcome problem - confusing, no clear instructions provided.
 - Even after repeated use, user may struggle with understanding interface features.

Suggested solutions to problems and errors:

- Problem: Text/Font Size

Solution: As the user cannot be expected to know how to adjust browser settings to increase font/text size, the designers should focus on implementing a feature that allows the user to increase text/font to readable size from the Knox County Library website.

- Problem: Location of Links

Solution: To make the links to various features more obvious, the designers have a number of options: move links to more obvious location, ensure links are consistent in placement, embed links in an easy to locate dropdown menu, or use bold, consistently-colored text/font to catch users' attention.

- Problem: Complicated Website Structure

Solution: As seniors are often homebound, it is essential that they feel comfortable using a library's website. In order to accommodate, senior patrons as well as other patrons who may not be tech savvy, a simplified design may be in order. If designers wanted to avoid a complete redesign of the interface, they should implement the open-source software package Guide on the Side (Farkas, 2012) to create online interactive tutorials for users who are not familiar with how to use the library catalog (or any other library feature).

Best Success Story

Task 1

Mary is 60 years old and she tried to finish task 1. When she opened the browsers, she entered a direct URL. The website turned to the homepage of Knox County Public Library. Then she clicked the button "Go to the catalog" right next to the searching bar. On the new page by clicking "Go to the catalog", Mary typed "22 day revolution" at the searching bar, then she

located the book “22 day revolution: the plant-based program that will transform your body, reset your habits and change your life.”

Task 2

The best scenario should be like the steps what we offered in the benchmark. First go to knoxlib.org. Find the button “Go to the catalog” quickly and click it. Then pull down the page and look under the “Recommended Reading” section of the catalog page. It’s not hard to find “More recommended reading lists”, and click it. Finally get a list of recommended reading and find “Cookbook Awards” by the alphabet.

Worst Success Story

Task 1

David is 61 years old and he wanted to find the book “22 day revolution” on the website of Knox County Public Library. Firstly, he opened Google Search website. Then he entered the name of the library in the Google search bar. By clicking the first searching result, he got on the homepage of Knox County Public Library. He typed “22 day revolution” in the search bar directly, and did not find the book. Since there is no instruction on the website shows that for specific searching task, users should click “go to catalog” at first, David just searched the result on the library’s home page. He went back to the homepage and scrolled down to the bottom to see where to go, then he clicked “EXPLORE THE COLLECTION”, and wished to find something, however, still nothing achieved. At last, he entered “go to the catalog” which is below “EXPLORE THE COLLECTION”. By typing the name of the book in the searching bar, he found the book.

Task 2

Doesn't directly go to knoxlib.org, but Google it. It automatically adds one more step. Cannot easily find "Go to the catalog" even it's obvious. Try to type it in the search bar, but finally find "Go to the catalog" is close to search bar. It's extremely hard to find "Recommended Reading" section of the catalog page because most of links are blue. Try to type "Recommended Reading" in the search bar but nothing helpful. Go back to the last page and look through the word one by one, finally find but it takes a long time. The font size is not enough to read in the last page and have to ask someone to help me to read it. Fortunately it's ranking by alphabet and successfully find "Cookbook Awards" at last.

Evaluation Questions

1. Is the correct action sufficiently evident to the user?
2. Does the user notice that the correct action is available?
3. Does the user associate and interpret the response from the action correctly?
4. What steps does the user take?
5. What does the user think when completing an action?
6. How does the user feel about the interface?
7. What part of the interface can be improved and how?

Summary/Conclusion

To complete the Cognitive Walkthrough Interface Evaluation, our team selected the Knox County Public Library's catalog (www.knoxlib.org). Because the library has such a diverse patron base, we decided to narrow the focus by limiting our target audience to the senior patrons (ages 65+). After

determining our target audience, team members created two search tasks and then benchmarked those tasks. Once this step was complete, team members used both the textbook, *Interaction Design: Beyond Human - Computer Interaction*, and Nielsen's Severity Rating to establish evaluation questions to be asked during the cognitive walkthrough. The team met via Google Hangout to allow the experimenters, Jiangnan and Yiqin, to complete each task using the screenshare feature allowing both Allison and Jamie to observe and take notes. After task completion, team members reviewed the observation notes and discussed problems with the interface and possible solutions.

Overall, our team saw real value in the Cognitive Walkthrough Method. By completing the assigned tasks under the guise of a senior patron, our team was able to determine where potential problems or errors might arise. The observation and subsequent data collection enabled us to look at both technical and emotional issues that could potentially prevent senior patrons (or any patrons) from successful interaction with our selected interface. Observation and data collection coupled with group discussion, allowed us, as a team, to identify the severity of the identified problems and develop possible solutions to correct those problems.

Team Member Reflections

Allison

Prior to beginning this project, I had never given much thought to how difficult it would be to complete a usability test while operating under the guise of being a senior citizen. I've had experience working with senior citizens when addressing computer problems and sometimes usability problems they bring attention to on UT websites. The most challenging part of this assignment for me was letting go of the learned searching skills that I am familiar with and use inherently.

Most senior citizens I have worked with while at the help desk have not been particularly tech savvy. There are a few who call in and know exactly what their computer problems are, how to explain them using the correct terminology, and how to ask for the help they need. Most that I have worked with have a small to moderate amount of familiarity with computers. The more savvy of this group are able to diagnose that a problem is occurring, but may not use the correct terminology or explain the problem clearly.

The less savvy of the group have problems performing basic computer functions, such as restarting a computer, finding the start menu on a Windows machine, or navigating to a web page without searching for the name in Google or their search engine of choice. While these particular users are sometimes painful to work with, they are part of the audience we need to focus on when designing interfaces.

Most of the problems we identified with the Knox County Library catalog interface were regarding the need for information to be more visually apparent in the interface. This was especially true for some of the links required for completing our second task. Another problem we identified was the inability to allow patrons to increase the text-size of the Knox County Library website from a function on the web page. While this type of change can be applied at the browser level, it's unlikely that patrons in this age group would know how to change the text-size without help. Lastly, we identified a need for instruction on use of the catalog and library website. While the catalog is relatively easy for me to use - since I use library catalogs on a regular basis - it would be more difficult for new patrons to start using without some included instructions for use and where links and features are located.

Overall, I really enjoyed completing this project. My group members were very flexible when scheduling times to meet to work on our tasks, and everyone contributed to the project

equally. Throughout the process of completing the tasks and writing the report, we were able to discuss some problems we have seen with other website interfaces as well. I believe that everyone in my group has gained a better understanding of usability testing and design from this course, and this project.

Jamie

Even though the first three assignments showed me the value of usability testing and the complexities of user-centered design, I was not certain how I felt about this particular assignment. I wondered how we would effectively simulate our target audience to gather usable data. Now, as we have completed the work, I am surprised at how very wrong I was. The Cognitive Walkthrough Method gave me insight into several aspects of the design process. Not only did we have to consider the technical aspects of the interface, but we also had to look at the emotional aspect of user reactions. This is where my previous experience teaching technology courses at the local senior center really came into play. I was able to observe our experimenters complete each task with the memories of the seniors' past reactions and experiences at the forefront of my mind.

As I am dedicated library patron in a very rural area, I was happy we chose a public library site as our selected interface. I wanted to understand the strengths and weaknesses of the interface, so I could bring that knowledge to the local library system in my area. It was interesting to note the differences in the our chosen site (www.knoxlib.org) and the site I frequent here at home (<http://www.sullivancountylibrarytn.org/>). Even though the Knox County Library Site has an interface that is much easier to navigate than my home library, both sites had similar problems on their catalog page (text size, unclear instructions). It was easy to recognize these issues when viewed through the eyes of a senior patron.

I have enjoyed the team and group projects immensely during this course. I was exposed to new tech tools to complete various aspects of each assignment and that's something I truly enjoy doing. For this particular assignment, we met using Google Hangout and were able to complete observations using the screenshare feature. We were also able to record the sessions in case we needed to refer back to user actions. And honestly, I had great team members that made completing this assignment a real pleasure. Everyone worked well together, and we were able to divvy up responsibilities with no problems whatsoever. It was a great experience to be able to work with folks outside of my major - Instructional Technology - as I was exposed to new perspectives.

Jiangnan

I act as an experimenter in the team. Our team find the two tasks together and Yiqin and me test each task. We find some problems on knoxlib.org website but I think cognitive walkthrough method should be a good way to solve this problem. User interface designer should be fit users feet and then get the best designing.

Based on what we learn the whole semester I have to say it's hard to make a perfect user interface design. Knox County Public Library should do more survey for their target audiences to improve their user interface designing.

This is the final assignment for this semester, I find some useful information on website to help me. Working as a team, we have to discuss on google hangouts or similar things. It's very glad to work with my team member, Allison, Jamie and Yiqin. It will be a very wonderful memory in the future.

Yiqin

The experience of doing this assignment gives me a better understanding of cognitive walkthrough method. The process is not complicated but takes more time since we need to take step to evaluate every action when finish the task. However, cognitive walkthrough method provides a way to test user interface more comprehensively, it is very thoughtful, and be cautious about every small problem that shows up in the user interface design.

I feel lucky that we chose the interface Knox County Public Library's catalog. It is a website that has some user interface design problems which provides us more opportunities to talk about their strength and weakness. Besides, I think we provided valuable suggestions and found out some problems on this website. In this way, users may get better experience when they use the website in future. It is also a great opportunity to take practical experience of using Cognitive Walkthrough Method.

The group working together experience was enjoyable and fun. We combined well and made progress. I also have more experience of working on Google Hangout and Google Docs. They are quite functional and I seldom used before. I wish I can take fully advantage of the things I learned during this course in the future!

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